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Our cover illustrations show, on the left, a bugler of the US 17th Infantry Regiment (see article page 21); and on the right a light company officer, The Suffolk Regiment (see description, Plate 2, in article page 26)

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EDITOR'S NOTES

IT IS INEVITABLE that a magazine such as this should attract a fairly voluminous mail bag of queries relating not just to actual contents but to all sorts of matters concerned with military history, uniforms, medals and insignia in general.

Unfortunately, we are not equipped to deal with such queries since we do not pretend to run an information service.

Many readers will therefore be delighted to learn that a new uniform and medal information service has recently been set up by Phoenix Enterprises who undertake not just to answer your enquiries but also to provide line drawings and in some instances colour illustrations to give you the precise information you require.

Phoenix Enterprises (Crewe) Ltd undertake to provide 'detailed information about uniforms or medals of the world, past and present'. Their research service is aimed at modellers and figure painters, dealers and collectors of the 'real thing', re-enactors, filmmakers, authors and 'anyone who needs accurate information'. Their scope also embraces non-military subjects such as the police and even the Boy Scouts...

We at 'MI' have not yet advantaged ourselves of this service so we can give no editorial recommendation but we can say that prices are modest compared with some (starting at £5) and that the company offers free quotations for supplying the information you want if you write to the following address, enclosing a stamped, self-addressed envelope: Phoenix Enterprises (Crewe) Ltd, 12 Bude Close, Crewe, Cheshire CW1 3XG. If Phoenix Enterprises live up to their promise, we welcome their appearance.

We are particularly proud to mention that 'MI' has become a founder member of The Battlefields Trust, a new organisation which, in a sense, has come into being as a result of the current desecration of the battlefield of Naseby by contractors and councils who share no concern about the destruction of important historical sites.

The Battlefields Trust was launched at the National Army Museum on 27 May and has a steering committee which is working hard to make it a registered charity, hopefully in time for the Battlefields Conference to be held at Worcester College, Worcester, from 13-15 August.

Naseby is a 'classic' case of an historical site being overrun by commercial interests, who have won their case against a hard fight by preservationists. It is 'MI's aim that this shall not happen again, given the rapidly disappearing background of battle sites in the United Kingdom and the uncertainty hanging over so many in the face of housing and supermarket devel-

opers. We therefore give The Battlefields Trust our full support and hope that many readers will do the same.

England alone has over 50 battlefield sites, none of which are currently afforded any protection under English law. It is the aim of the Trust to either buy or, in conjunction with other preservation groups and sympathetic local councils, make sure that these are not exploited. The authenticity of the project is stamped by the inclusion on the steering committee of officials and representatives of the

'THE LONGEST DAY'

YES — a tour of the D-Day beaches for two people next summer will be the first prize in our next reader's competition, so don't miss the September issue, 'MI' 52.

Major and Mrs Holt's Battlefields Tours Ltd, who have been organising battlefield tours for 16 years now and currently run over 60 a year, have generously offered two places in one of their four-day Normandy tours for a reader and friend of choice as the star prize in our autumn competition. Anyone who has been on a previous tour will appreciate that 'original' is still synonymous with 'best'.

The lucky winners will depart from London in a luxury coach on day one, staying overnight in an hotel in CAEN, where the Germans gave Monty such a hard time. (Hotel breakfast and dinner with wine each day are included in the prize.) On the second day, following your "battle briefing", you visit the American beaches — UTAH and 'bloody' OMAHA — as well as STE MERE EGLISE, focal point of the American airborne landings. On day three you visit the Anglo-Canadian beaches — GOLD and JUNO — where the remains of the Arromanches 'Mulberry' can still be seen. Finally, on day four there is a visit to PEGASUS BRIDGE, the key objective seized and held by British paras until relieved by Commandos. Afterwards you enjoy a leisurely drive back to London with a stop en route for those who want to buy lunch or simply sightsee further. The tour also includes a visit to BAYEUX, home of the 1066 tapestry and Battle for Normandy Museum.

Watch for full details and part one of the new competition in next month's issue.

National Army Museum, the Royal Armouries, the Royal Military Academy, Sandhurst, *The Times*, the Sealed Knot, the National Association of Re-Enactment Societies, Major and Mrs Holt's Battlefields Tours, plus authors and history teachers whose names are well known.

Now for the mundane details. Founder membership of the Trust costs £10 for individuals or £35 for groups or companies (in return for which you receive a regular newsletter and, for example, a discount off selected battlefield tours — plus the satisfaction of knowing that you are contributing towards the preservation of something meaningful to all of us). Cheques should be made payable to The Battlefields Trust and sent to Michael Rayner, 98 Freedom Road, Walkley, Sheffield S6 3TR. Michael is happy to answer queries about the Trust or about the Battlefields Conference on 0742 342091, as is the project co-ordinator, Kelvin van Hasselt — 2 Winton Close, Solent Avenue, Lymington, Hants SO41 9SU, tel (0590) 671533 daytime or 671695 evenings.

We realise it is short notice but correspondence to 'MI's old editorial address is still catching up with us, so anyone who wants details of the Battlefields Preservation & Tourism Conference mentioned above should also contact Michael Rayner. This three-day event is residential and the all-inclusive price includes not just talks by such well-known names as David Chandler and tours of Worcester and Tewkesbury battlefields, but workshop sessions, all meals and even your drinks... The price for founder members of the Trust is £180, for non-members £235.

If this issue's notes seem to be full of battlefield tours, it's either the time of year or, as Willie Garvin would have put it, 'the flux, Princess'. So we round off with mention of an unusual idea from Evans Tours, who have cleverly combined the concept of five cross-Channel invasions culminating in decisive battles to give you the choice of either a seven- or ten-day tour in August, September or October. (The news reached us too late to enable us to mention the July one.) For £595 upwards you can travel in a luxury coach and enjoy some delightful hotels — the price even includes dinner each night — as well as side excursions, while visiting the battlefields of Hastings, Crécy, Agincourt, Normandy 1944 and Bosworth. Each tour is accompanied by a qualified guide and guest lecturers who will give talks on their specialist subjects. One of these is Lieutenant-General Sir Napier Crookenden and you get to have tea at Chatsworth with, appropriately, the opportunity to ask the General any questions of personal interest.

Bruce Quarrie

THE MAY SALES included several that were of interest to collectors for the results seem to suggest that there might be a slight, perhaps very slight, upturn in the market. However, in keeping with all the professional financial forecasters, this optimistic assumption should be qualified and a cautionary note about it being too early to be sure should be added.

Sotheby's Marine Sale did quite well although the Lloyd's Patriotic Sword failed to sell while the more ordinary naval weapons did quite well. Medals were, as always, well in demand and it is of interest to report that one dealer who had previously specialised in arms and armour has said quite firmly that he finds it better to deal in medals. The profit margin may be less but his turnover is faster. The majority of British campaign medals sell at around one to two hundred pounds — of course, rarer examples will realise many times this figure but it is quite possible to build up a reasonable collection and seldom have to pay more than £200 for any single piece.

On 27 May Glendining's held their anticipated Jubilee Medal sale, exciting because the collection had been forgotten for a century and was unknown to collectors and dealers. Suddenly there were for sale medals never before on the market with some 62 Waterloo medals, Naval and Military General Service as well as regimental and others — over 500 in total. Prior to the sale there had been some debate amongst dealers and collectors as to what effect this number of new medals would have on the market. In fact there was no falling off of prices as some had feared and the prices of Waterloo Medals, despite the number, remained strong. Mr Pierce Noonan, Glendining's medal expert, made the point that the medal itself was not of prime interest to the collectors but they were concerned with the name and regiment around the edge. It is the association with great deeds, adventure and the past that appeals. For most collectors it is the knowledge that the original owner was present at the battle and any information that they can research is exciting and satisfying. One very rare medal to an officer of the Black Watch sold for £5,500, well above the estimate, and in all the sale realised £189,137. In addition to the medals there were some shoulder belt plates but it will be a very long time before another such medal sale is held.

There is certainly something far more personal about a medal than most items of arms and armour. In this field the object is valued for itself and it is unusual to have any idea of past owners or the circumstances of its manufacture and use. When such information is known as in presentation weapons the price is bound to be much higher and the same is true for

THE AUCTION SCENE

items previously recorded as part of a famous collection.

Phillips finished the month with a good mixed sale which included something to interest most collectors. The sale started with some 40 lots of Japanese material ranging from World War II issue swords to very fine *Aicuchi* which made £2,400 against an estimate of £1,500. A good Japanese matchlock musket which lacked its priming pan cover sold for £1,400. Among the Eastern edged weapons was a most unusual sword with a long tapered blade like those found on Khyber knives, but the jade hilt was of the type usually seen on Mogul daggers or Khanjars — it sold for £850.

Demand for Third Reich material continues unabated, particularly for edged weapons. One great problem that the collector faces in

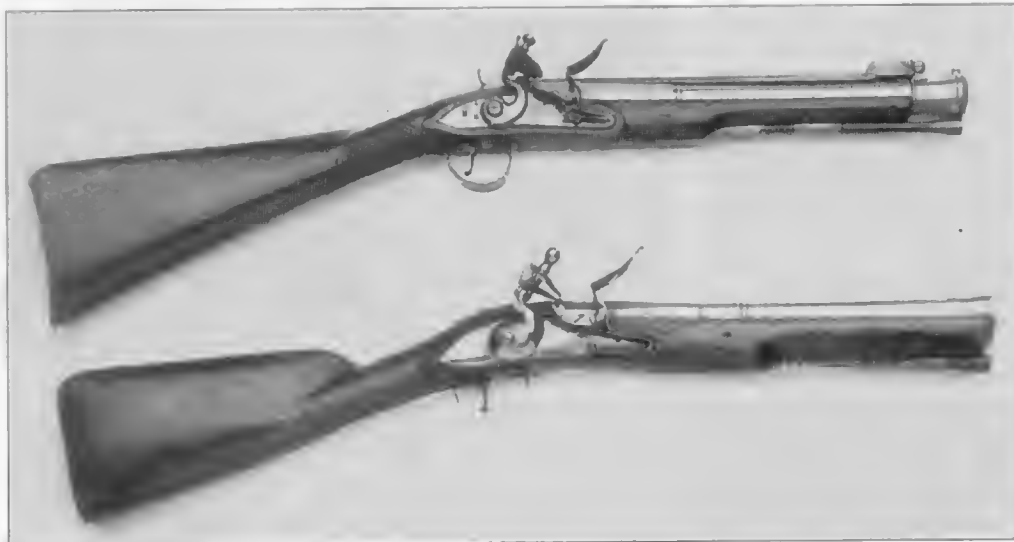
this field is the number of fakes and replicas which abound and here buying in auction offers a safeguard. The item will have been examined by an expert and should it be found to be suspect it can be returned. At this sale there was a sprinkling of Nazi weapons and the more common NSKK and SA daggers sold at around the £100 mark. Luftwaffe material was a little more expensive with a 2nd Model dagger realising £180 and a sword £220.

Scottish dirks were around the £200 mark apart from two fine Argyll and Sutherland Highlanders' ones which went for £550 and £580. Prices rose for the lots of an earlier date and a good silver hilted smallsword hall-marked for 1774 sold for £850, while another smallsword with a fine grip of Augsburg enamel sold for £1,400. A good rapier of



Left An English rapier of early in the 18th century. The hilt is of chiselled iron and the blade is signed Antanni (£1,400). **Right** An English dish-hilted rapier circa 1640 with finely chiselled hilt and a blade of diamond section (£1,000)

Below top Brass-barrelled flintlock blunderbuss with spring bayonet and marked Probin — in very good condition (£1,400) **Bottom** An earlier blunderbuss circa 1720 with the more stubby appearance and no spring bayonet.



Below Top An English mode officer's flintlock pistol marked Beckwith. Its rather elaborate decoration indicated that it was probably intended for the Middle Eastern market (£380). **Bottom** A rather nice brass barrelled flintlock blunderbuss pistol with a silver lion-head butt cap. Marked T. Richards Royal Exchange and dating from late 18th century. (All photographs courtesy Phillips.)



about 1630 sold for £1,600 and another English rapier of circa 1640 made a respectable £1,000. The room then adopted that quiet, almost tense air which seems common to all auctions when a prime lot comes under the hammer. The lot in question was a superb gold and enamel presentation sword of 1796 with an estimate of £1,500-£20,000. The price rose quickly past the lower figure and the sword finally sold for £15,500.

Among the firearms were some rimfire derringers which, as is common nowadays, sold quite well. A few years ago when these were only available on a firearm certificate they would have made only a few pounds. A cased Second Model Tranter percussion revolver sold for £950 but the top price was for a military wheellock pistol of the early 17th century — £1,700. It was closely followed by a brass barrelled flintlock blunderbuss with spring bayonet made by Probin which made the rather surprising price of £1,400.

The militaria section included a number of truncheons and tip-staves and these seem to be realising very good prices at the moment. Top price was £2,300 for a fine ivory Mogul priming powder flask carved overall with animals and scenes of tigers attacking deer. A fine tschapka of the Fifth Royal Irish Lancers, post-1902, sold for £2,000.

It will be interesting to see if the apparent revival of prices continues when Christies hold their next sale of militaria at South Kensington. This is their first sale for some time and the long gap probably indicate the problem most auctioneers are suffering from acquiring enough good quality material to mount a worthwhile sale.

Frederick Wilkinson

British Army Caricature, 1775-1992

BORIS MOLLO

THE ART OF the caricature became established as a popular art form in the late 18th century when it was used as a means of disseminating illustrated satire on political issues and questions of the day. From the start the military proved a popular target, having assumed a high profile during the American War (1775-83) and the early stages of the Napoleonic Wars (from 1793). The elements of the army which were closest to the population and which were seen most were the militia and volunteers. The militia, embodied in time of war and a first line reserve, usually set up camps to provide a recruiting base, training centre and staging post for raising and equipping an expeditionary force. Visiting the camps became a popular pastime and the caricaturists had their own field days there depicting incompetent soldiery, ragged recruits and amorous visitors. Later threats of invasion and the raising of the Yeomanry and Volunteers brought a spate of caricatures on the general theme of 'John Bull — Armed and Ready!' usually depicted as more ready with enthusiasm than military skill. Artists who excelled in this field included Henry Bunbury (1750-1811), James Gillray (1757-1815) and, the best known of all, Thomas Rowlandson (1756-1827), a draughtsman and engraver, well known for his sporting and topographical subjects both as a straight artist and as a caricaturist.

There also began at about this time a genre for individual caricatures, either highlighting the personality or the uniform or a combination of the two. One of the earliest of these was the Edinburgh miniaturist and draughtsman, John Kay (1742-1826), whose series of original portraits highlighting Edinburgh characters included many soldiers either from Scottish regiments or from English regiments based in Edinburgh. Better known was the Dighton family, Robert Dighton Senior (1752-1814), Robert Junior (1786-1865), Denis (1792-1827) and Richard (1795-1880), all of whom showed particular interest in depicting the military. This was particularly true of Robert Junior who eventually became a soldier and whose

THE CURRENT round of cuts and amalgamations within the British Army has revived an interest in military caricature which recently inspired the National Army Museum to mount an exhibition of new prints by artist Simon Dyer. This article examines the 200-year tradition.

series of portrait caricatures of notable characters of the day includes some 50 military subjects. The majority of these are general and staff officers but there are several from the Household Cavalry and Foot Guards and three important prints of hussar officers: Lieutenant-Colonel Kerrison of the 7th Hussars, Lieutenant-Colonel Quintin of the 10th and Major Forrester of the 15th. Published in about 1807, they are the earliest prints to portray accurately the uniform of the newly converted Hussar regiments.

Important among military prints of the Napoleonic era were the French paintings and sketches of the allied forces occupying Paris after Waterloo. The arrival of the armies of Britain, Austria, Prussia and Russia came as a shock, tinged with fascination for the more outlandish of the occupying forces, cossacks from one end of the continent and Highlanders from the other. It is apparent from the number of prints produced that there was great interest in these events and the output ranges from accurate and detailed uniform plates to crude or even vulgar caricatures, which provide good evidence of the attitudes and behaviour of both sides. They deride the British soldiers' habit of eating quantities of fresh grapes and the unfortunate results which inevitably followed, and depict French ladies surmising on the eternal question of what the Highlanders wore under their kilts.

Caricature prints reached a peak in the years of political activity following the end of the Napoleonic Wars, only to fade away in the 1830s and 1840s when illustrated newspapers such as *Punch* began to appear. The caricaturist found almost any subject worthy of consideration, particularly if it could be made relevant to the political situation, and the activities of famous heroes of

the Napoleonic Wars such as the Duke of Wellington and the Marquess of Anglesey were frequent subjects. There was also an interesting genre of caricatures which focused on the scandalous behaviour of some of the wealthier cavalry regiments, particularly the 10th Hussars. On arriving in Dublin in 1823 after many years at fashionable Brighton, an officer was heard at the Lord Mayor's Ball to announce that 'The Tenth Don't Dance', and this phrase was much used by the caricaturists in all sorts of situations. The caricaturist of



Major Frank Forrester. Robert Dighton Junior drew this caricature in about 1807 and entitled it 'An Officer of the 15th or King's Hussars taken from Life'.



Left:
A watercolour by 'Snaffles'
(Charles Johnson Payne)
showing a dismounted officer
of the 4th (Queen's Own)
Hussars in full dress, circa
1910.

Above
One of Major T.S. Seccombe's
delightful 'Military Caricatures'
from about 1875 entitled
'Hopelessly Clubbed'. It shows
a Yeomanry subaltern having
difficulty drilling his platoon,
to the ire of his watching
General.

Below:
'The Second Lieutenant who
took the CO's Savoury'.
Colour print by H.M. Bateman
dated around 1930.



this era loved to mock the excesses of uniform and behaviour of the smarter regiments of the army and there were few attempts to capture regiments or personalities in a sympathetic way as happened later. On the other hand these caricatures often provide incidental detail of everyday life not otherwise depicted, such as the interior of an officer's room.

The serious and hard-fought wars of the Crimea and the Indian Mutiny produced little to laugh at but the volunteer movement which began in 1859-60 proved a fertile subject for the caricaturists. They enjoyed the prospect of Mr Jones, prosperous and somewhat overweight, leaving his respectable home and office to squeeze himself into military uniform and experience the rigours of a night or two under canvas. Even Currer and Ives, the great American print publishers, made a rare foray into the British print market with a delightful lithograph *The Queen's Own — Wimbledon Style*.

Generally, from the early 1860s to the mid-1880s the print publishers concentrated much more on caricatures than on serious representations of uniform. The trend had begun

in France with the series *Types Militaires* by Jules Renard (using the pen name 'Draner'), which comprised 136 coloured lithographs of which 19 were British. As caricatures they were more powerful than anything published in Britain with the added advantage of being the work of an outsider, and they are carefully and accurately observed.

British caricaturists came to the fore in the 1870s, with three well known series, all originally published in book form, two by Thomas Strong Seccombe (fl.1865-85), *Army and Navy Drolleries* and *Military Misreadings of Shakespeare*; and the third by Surgeon-Major Fitzgerald Edward Scanlon (1834-1904), *A to Z: being Twenty Six notes on a Soldier's Trumpet*. They were obviously published in large numbers as they are readily found either in book form or as individual chromolithographs. They are amusing, attractive and accurate and often provide added interest by showing unusual uniforms or scenes. The best of the genre is the rare series of six *Military Caricatures* by Seccombe, larger in format than the others and, from the start, intended as prints rather than book illustrations. They include

'Hopelessly Clubbed', a baffled infantry subaltern with an irate general.

Another well-known series first appeared during this period with the start in 1874 of the caricatures of famous men of the day, published by *Vanity Fair*. The series continued until 1914 by which time there had been over 90 plates of military men in uniform. They were the work of a number of artists, the best known being 'APE' (Carlo Pellegrini; 1838-89) and 'SPY' (Leslie Ward; 1851-1922). The majority of the military plates depict general officers but there are some interesting regimental uniforms to be found including 'C.I.V.', a portrayal of Colonel W. H. Mackinnon of the Honourable Artillery Company who commanded the City Imperial Volunteers in the Boer War.

By this time, there was a growing demand from regimental officers for pictures of their regimental uniforms, past and present. This was partly met by serious artists such as Richard Simkin (1851-1926) and Reginald Wymer (1849-1935) but there was also a demand for more caricatural work, usually a single figure of an officer in full dress against a grey or white background with the name or nickname of the

regiment prominently displayed. One of the first to produce this kind of work was Charles Johnson Payne (1884-1967), better known as 'Snaffles', who worked in this style before 1914 when he initially covered as an illustrator for *Graphic* magazine. He went on to produce a fine series of military types of the First World War and after the war concentrated on equestrian sporting scenes. Several other artists worked in a similar style and continued to do so until recent years.

To this list of names can now be added that of Simon Dyer, a 29-year-old former Welsh Guards Officer who has painstakingly researched the dress and ceremonial uniforms of the present-day Army, preserving them in sympathetically observed but humorous detail before even more of them disappear in the current round of amalgamations. Dyer, whose portraits are available as a set of 56 limited edition prints*, has helped to revive the art of military caricature for a modern audience, his style underlining the British affection for the uniform, dress and style of the Army.

Three other caricaturists who did much or all of their work in the military field



Well — what do they wear under their kilts? A Martinet print dated circa 1815 and given the title 'Le Prétexte' showing a Sergeant of Highlanders in Paris.



Left A 'Draner' (Jules Renard) lithograph from about 1864 in his 'Types Militaire' series showing a Glasgow Rifle Volunteers officer on his way to a day at the ranges.



Right 'C.I.V.' — Colonel W.H. Mackinnon of the City Imperial Volunteers, 1901 — from the Vanity Fair series by 'Spy' (Leslie Ward).

prised groups of officers, with the artist working at the function, to bring out the characteristics which would make his subjects recognisable.

Simon Dyer follows more

closely the traditions of 'Spy' and 'Snaffles', a tradition of making fun of the Army in a sympathetic and amiable manner, which goes back some 200 years. **MI**

deserve mention.

The British soldier in the trenches of World War I with his cockney humour and unheroic fortitude was epitomised by 'Old Bill', the creation of Bruce Bairnsfather (1888-1959). He served in the trenches as an officer in the Royal Warwickshire Regiment sending his cartoons home. After several encounters with the censors who were troubled by his ability to get close to reality, he was appointed an official officer cartoonist. His work was published regularly in the *Bystander* and was also published in collected editions. He reappeared in the Second World War as an official war artist to the US

Army in Europe.

Typical of the 1930s was Henry Mayo Bateman (1887-1970), born in Australia, whose work was published in the *Tatler* magazine. He took great delight in producing a series of hilarious scenes of faux-pas against the middle class morality of the time and the Army with its strict codes and taboos was a perfect target. His most famous scene was 'The Guardsman who Dropped it!', but he produced several other military subjects including 'The Second Lieutenant who took the CO's Savoury'.

Lastly there was Fred May (1898-1981), whose speciality was to travel around to mess functions and produce caricatures of the assembled officers which were usually published in *Tatler* magazine. They com-

As the 5th D.G.'s Do Not See Themselves'. Caricatures of 5th Royal Iniskilling Dragoon Guards officers by Fred May, circa 1930.



*Illustrated catalogue in colour available from Sporting & Military Caricature Publishing, The Old Rectory, Langsynd, Powys NP8 1LS. Each signed and numbered print (limited to 500 unmounted copies) costs £30 including postage and packing, and part of the proceeds from each sale will go to the Army Benevolent Fund whose patron is Her Majesty The Queen. Each print measures 8 1/2 x 16 inches overall with a picture area of 6 x 11 inches.



Officer of the Queen's Own Hussars in No 1 Dress Ceremonial, one of Simon Dyer's new series of prints.



No 1 Dress Ceremonial also being worn by an officer of the Royal Highland Fusiliers (Princess Margaret's Own Glasgow and Ayrshire Regiment) in another of Simon Dyer's delightful prints.



Auxiliary Unit lapel badge, 201/202/203 Battalions. The border and numerals are gold, the GHQ Home Forces' crown gold and white. The upper half of the shield is red, lower portion blue.

*'Should you ask me whence
these stories,
Whence these Legends and
Traditions,
With their nasty sounds of
banging,
and their smells of smoke and
almonds,
I should answer, I should tell
you,
Tales they are of Home
Defences,
Of a Very Secret Movement...'*

THESE WORDS, a parody on Longfellow's epic poem *Hiawatha*, were written in 1944, by a retired bank manager, an active member of 203 Devon Regiment (Auxiliary Unit). His verses described the formation and development of

THE BRITISH RESISTANCE MOVEMENT, 1940-44 (1)

GEOFFREY BRADFORD

RECRUITED SECRETLY and not even enrolled as soldiers to further protect their anonymity in case of German invasion, the Auxiliary Units formed by Colin Gubbins were to have been Britain's last ditch line of defence, operating in a network of cells from hidden underground bases.

the 'Auxunits' which, it has been said, were Europe's first and best trained Resistance movement. (See 'MI' 28, September 1990).

HISTORY

Even before the war, some thought had been given by the War Office to the creation and arming of guerrilla units and several people can claim, with some justification, that they originated the proposal. However, the credit for taking up and implementing this idea must be given to a Major Gubbins, (later to become Sir Colin Gubbins and to achieve fame as the head of SOE). In 1939, he was working for Department MI(R), Military Intelligence (Research), and had carried out studies and written reports on guerrilla warfare. Early in the war, he was involved with the Independent

Companies and took several of these units to Norway for the abortive 1940 campaign.

On his return to Britain in June 1940 and now a Colonel, he was instructed to create an underground army which would form the nucleus of a resistance movement in the event of a successful occupation of all or part of the UK by German invasion forces. This organisation was to be known by the codename of 'Auxiliary Units' and was to come under the direction of GHQ Home Forces, whose Commander in Chief, at that time was Field Marshal Ironside.

Initially Gubbins requested and was given the support of some dozen officers, hand-picked from those known personally to him and on whom he could rely to 'get on with the job'. These were known vaguely as 'Intelligence Officers' and

were to form the Regular Army units who were to be responsible for the organisation and local training of the proposed resistance movement.

The Auxiliaries themselves were all to be part-time volunteers, recruited from members of the recently formed Home Guard, and Gubbins was given the authority to requisition suitable men. These recruits varied in age and occupation, from young students, factory workers in reserved occupations, miners and farmers, to professional men like doctors and accountants. Age was no barrier, as long as the recruit was fit and capable of existing under the harsh conditions anticipated. Gamekeepers and countrymen of all sorts were much sought after, as well as those with experience of Scouting and woodsmanship.

The recruits were told that they were being selected for special Home Guard duties, and were being 'posted' to one of three battalions, numbered 201 (Scotland and Northern Counties), 202 (Midlands) and 203 (London and Southern Counties).

Whilst these men honestly believed that they were in the Home Guard, this was purely a

Auxiliary Unit Intelligence Officer, Captain L.R. Bradford, and Regular Army support platoon, photographed at their HQ in Thorverton, Devon, in 1943. Captain Bradford and several men from this group later joined 1 SAS Regiment. Bradford was killed in July 1944 while operating behind the German lines in central France.





Fig. 13



Fig. 14



Fig. 115



Fig. 116

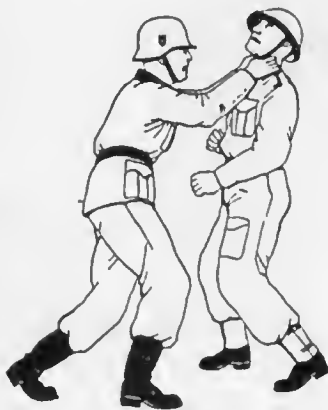


Fig. 23



Fig. 24

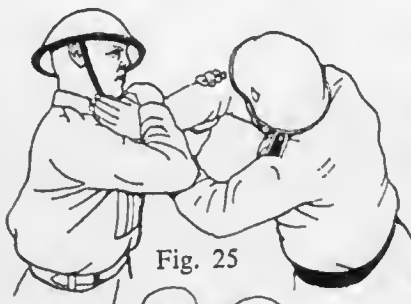


Fig. 25

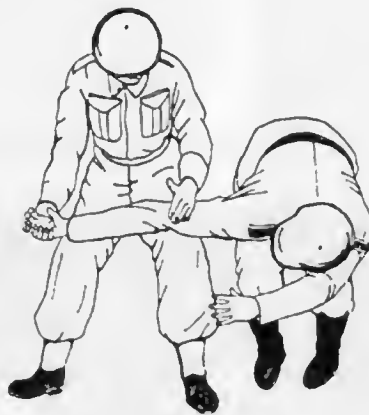


Fig. 26



Fig. 34

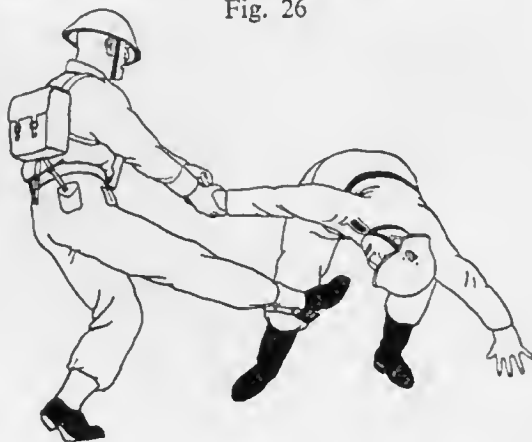


Fig. 35



Fig. 48

Typical illustrations from Fairburn's book of dirty tricks, all reproduced actual size. Fig 13/14 — the knee blow followed by the chin jab; Figs 23-26 — how to get out of a two-handed strangle grip and break your opponent's arm; Fig 34/35 — how to get out of a bear hug and kick your opponent in the face; Figs 115 and 116 — cutting arteries with the Fairburn knife; Fig 48 — sentry hold, a combination blow to the windpipe and punch in the small of the back, preventing him crying out and rendering him semi-conscious.

cover, and they were never officially registered as being members. Since they were not enrolled as fighting men, they were not strictly covered by the Geneva Convention, although their uniform may have given them some degree of protection against being shot out of hand if captured.

It is known that likely recruits were vetted before being approached. Gubbins had arranged for this to be done by plain clothes or Special Branch police officers who made discreet enquiries from employers or neighbours without knowing or stating the purpose of the enquiry. Once recruited, volunteers were subject to the Official Secrets Act, and their wives and families were largely unaware of the special duties in which they were involved.

The movement was organised on the cell principle, the cell being a patrol of some five or six men led by a sergeant. A volunteer Group Leader, given the rank of a Home Guard Lieutenant or Captain, would be responsible for several such patrols within a ten or fifteen mile radius of his home, and certainly in the early days, this was the only contact between individual patrols.

By September 1940, the Auxunits were firmly established. Gubbins anticipated that any successful invasion would be seaborne and he set up his resistance units within the coastal belt, extending from South Wales, around the Southern Counties, up the East Coast, and as far north as John of Groats, with an obvious preponderance of units in Dorset, Hampshire, Sussex and Kent.

Eventually there were patrols all over the UK extending inland as far as Manchester and Hereford, and by late 1941 nearly 600 had been formed, comprising over 3,500 Auxiliaries.

By this date, most counties had their own Intelligence Officer, who was often stationed in his home county because of his contacts. Amongst these regular officers was the actor, the late Sir Anthony Quayle, who was Intelligence Officer for Northumberland. Each Intelligence Officer was given a platoon of some dozen NCOs and men, to help him with the supervision, distribution of supplies to and local training of the Auxunit patrols in his area.

TRAINING

Colonel Gubbins decided that a centrally situated base was needed to provide the specialist



A young Auxiliary volunteer wearing an 'acquired' 37 Pattern BD blouse totally lacking in insignia.

training for his forces and to act as his national HQ. He chose Coleshill House, a large remotely situated country house situated near Highworth, Wilts, for this purpose.

Patrols and individual Auxiliaries were sent to Coleshill for training in the use of explosives, sabotage, booby-traps and unarmed combat. Instruction in the latter was based on a book by W.E. Fairburn, designer of the Fairburn dagger (Field Service Fighting Knife.) Having been a policeman in the seamiest areas of Hong Kong, Fairburn could write with authority on all the dirty tricks that could be employed in close combat, as well as on the art of silent killing.

Secrecy was such that trainees did not report to Coleshill direct. They were instructed to call at the tiny post office in Highworth, where, on proof of their identity, the postmistress would leave them, make a short phone call, and then advise them that transport was being sent to collect them.

UNIFORMS AND INSIGNIA

As part of their Home Guard cover, Auxiliaries wore the standard 1940 pattern battle-dress blouse and trousers, with the FS sidecap. The trousers

were tucked into black or dark brown leather anklets over standard black ammunition boots. No equipment was worn, other than a webbing or leather waist belt, supporting a revolver holster.

As a concession to the 'dirty' conditions under which Auxunits operated, either in training or, more commonly, in the construction of their underground 'hideouts', they were given Overalls, Denim, comprising a separate blouse and trousers, worn over and to protect either their uniform or civilian clothing, together with black rubber short lace up boots having a waterproof tongue behind the lace eyelets. These were ideal for construction work or for moving soundlessly over paved surfaces. The rubberised brown groundsheet/cape was also issued and some units wore a woollen 'cap-comforter' with their denims.

Insignia were minimal, the cap badge being that of the county regiment. The Home Guard shoulder title was worn on each shoulder, surmounting the battalion number and the county name or abbreviation, both in black on khaki denim patches. Off duty, members could be identified by a small metal lapel badge, bearing the three battalion numbers, in cross formation on the red and

blue shield and crown of GHQ Home Forces. Some Auxiliaries wore better quality Army issue uniforms 'acquired' from friends or relatives in the Forces.

WEAPONRY

Personal weapons were, with some exceptions, intended for defence rather than offence, as in no way was it proposed that they should fight pitched battles with superior forces but rather should avoid direct confrontation, killing only when necessary to achieve surprise or to effect material damage on the enemy's supply lines or stores.

These men must have revolvers', scribbled Churchill on one of Gubbins' weekly reports, and so they were issued with these, usually .38 Smith and Wessons or .455 Webley Mk VI. Some Auxiliaries possessed or acquired German Mausers or Lugers, which were much prized if they accepted the 9mm Sten gun ammunition.

Other personal weapons were the Fairburn Commando dagger, which was worn just above the knee, attached to the battle-dress trousers by five khaki buttons engaging in buttonholed tags in the top and sides of the leather sheath, and a vicious assortment of personal rubber truncheons (issued) and coshes (home made). Many Auxiliaries also made their own 'cheese-wires' for garrotting sentries. These consisted of a two-foot length of thin piano wire with a short broomstick handle at each end. Ingenuity did not stop there. It is known that some patrols in Kent experimented with bows and arrows for silent killing and to carry explosive or incendiary charges.

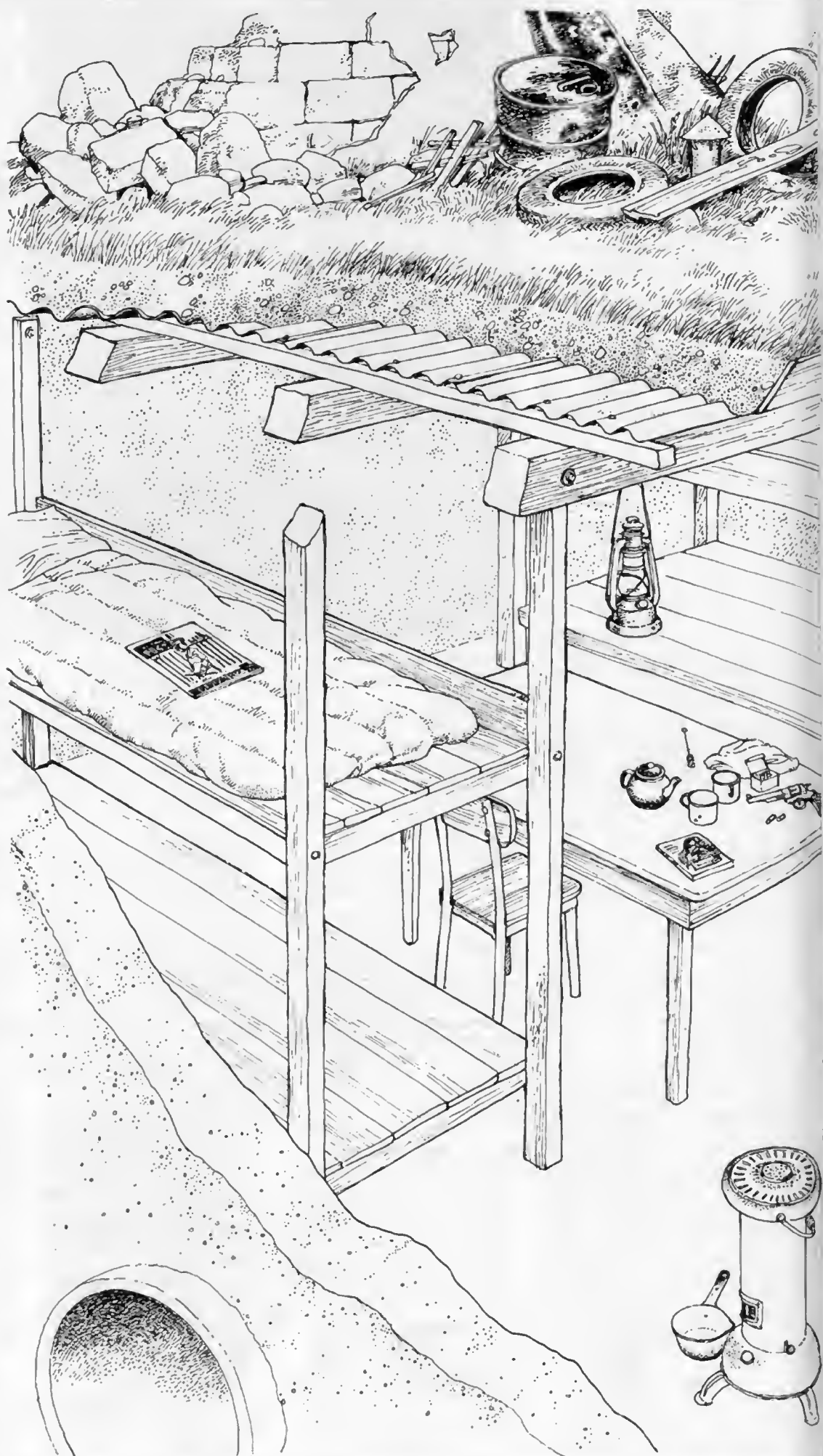
Auxiliary Units were given high priority in the provision of patrol weapons and explosive devices. They were provided with such items as Thompson sub-machine-guns, plastic explosive, and certain delay mechanisms, long before these became generally available to the Forces.

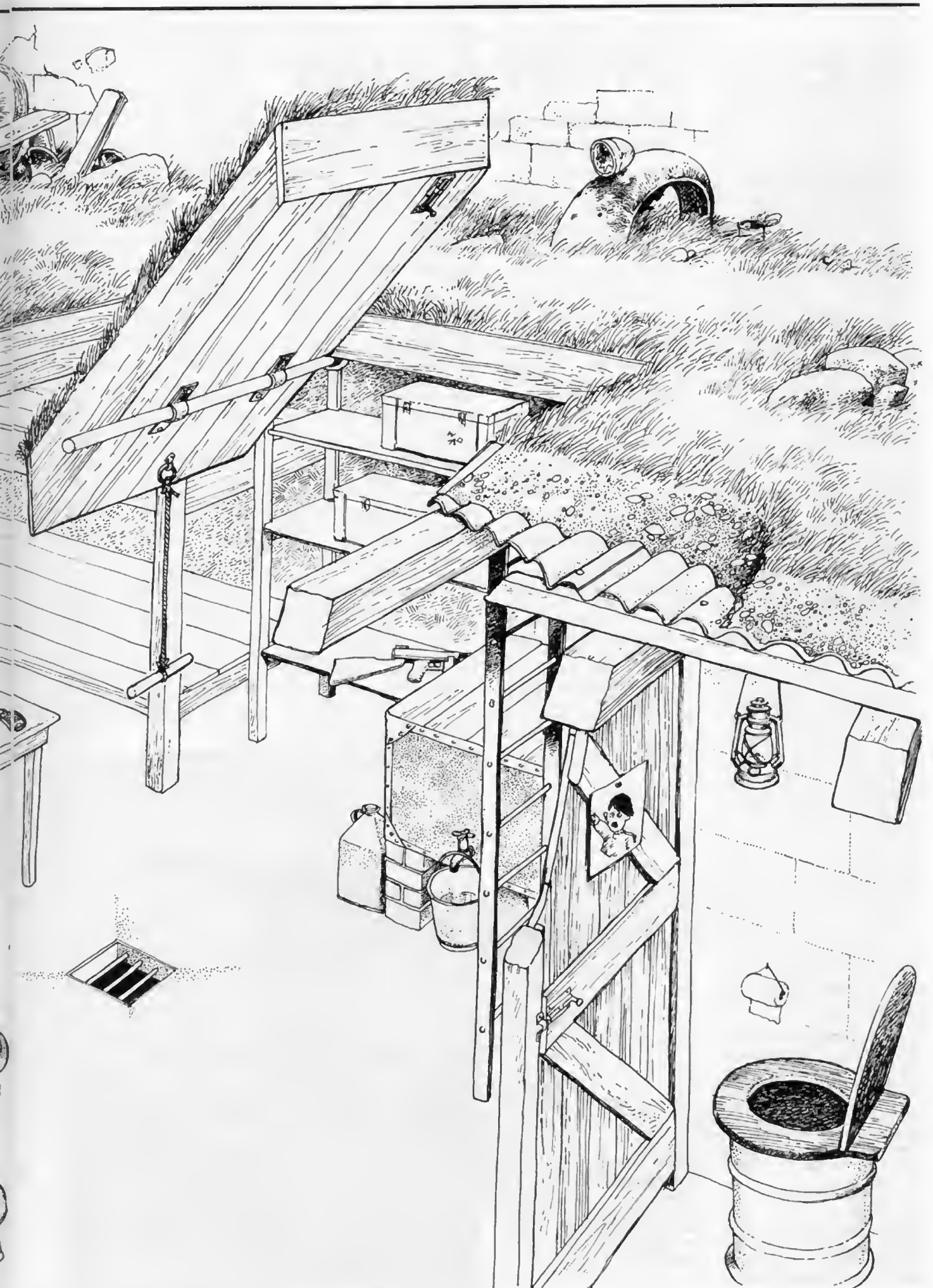
As well as the .45 Thompson, unit small arms included the Sten and a .22 BSA or Winchester sniping rifle with telescopic sights and silencer. These were intended to take out sentries and guard dogs (and, possibly under operational conditions, collaborators and informers, although these intentions were unspoken).

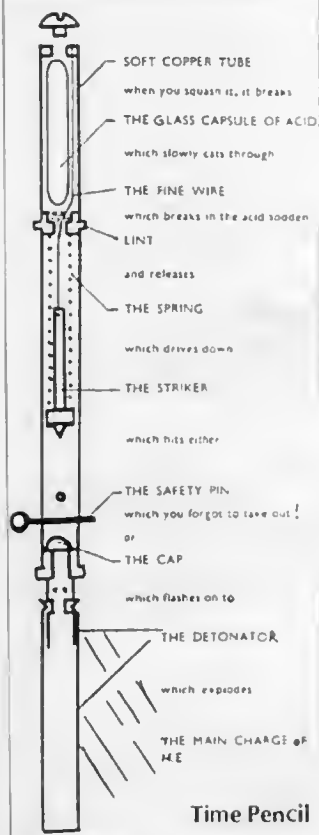
Other patrol weapons were the 36M (Mills) hand grenade for possible use in ambushes and which could also be fired from a rifle, adapted for this purpose, to take a cup discharger

An Operational Base (OB)

Peter Dennis' reconstruction shows a typical 'hideout' for an Auxiliary Unit patrol of up to seven men. About a thousand were constructed and although most were demolished at the end of the war, some are still discovered by farmers from time to time. They were designed as safe places of concealment for men, weapons and explosives and provisioned for a fortnight. Their siting was critical, because access had to be easy but concealment all-important. Most were therefore built in woodland or under derelict farm buildings. Where possible they were sited close to large country houses which could be expected to be taken over by a German occupying force. Although not all were as sophisticated as shown here, there were common requirements, including a hidden access hatch and a separate escape tunnel. Concealed ventilation and drainage systems were needed to minimise the inevitable damp which would have an adverse effect on weapons and explosives. Wooden bunk beds, tables and benches, paraffin lamps and heaters were also provided, together with a chemical toilet and storage lockers. Each OB also contained a bottle of rum, though whether this was for medicinal purposes or to boost morale was never made explicit... Early OBs were constructed by the men of the Auxiliary Units themselves, often using materials 'appropriated' from railway sidings or dockyards, but later the Royal Engineers took over the work, although even then specialist civilian contractors had to be brought in on occasion. The strictest security precautions were taken to ensure that these men did not know what they were building or even exactly where they were. The example illustrated has a counterbalanced timber box trap door and there is one — probably apocryphal — story of a courting couple in Essex who literally 'felt the earth move' beneath them! Other OBs were constructed in existing house cellars or in disused tin and coal mines as well as natural caves or man-made caves in chalk and sandstone regions. Local villagers inevitably often found out that something was going on, but the usual reaction was to dismiss the activity as the Army 'playing silly buggers'. Some were also discovered accidentally and had to be abandoned, particularly round the southern coastline when the build-up for D-Day occurred, but by this time there was no practical use for them any longer so no harm was done.







and special cartridge. The 36M could also be utilised as an effective trip-wired booby-trap, its firing lever held firm in an empty tin rigidly attached to a tree.

The No 77 Smoke Grenade was also issued. This looked like a small thermos flask, its tin body containing white phosphorus which ignited on contact with air, creating a dense smoke. Removal of the black plastic 'cup' exposed the firing mechanism. When thrown, a weighted linen tape unwound, withdrawing a loose safety pin, which enabled, on impact, a metal ball bearing to set off a cap and detonator, distributing the phosphorus over a wide area.

Some patrols had the so-called 'sticky bomb', a glass sphere containing liquid nitroglycerine, covered in a fabric cloth impregnated with some sticky substance. This was supposed to make the bomb stick to its target when either placed in position or thrown. It was detonated through a mechanism in its handle but, since the sticky sphere was protected by a two part metal cover which had to be removed before use, these were cumbersome weapons and generally disliked.

EXPLOSIVES

These were to be the main offensive weapons of the Auxunites, whose role was to attack the enemy's stores, transport and communications

rather than his ground troops. Every Auxiliary received training in the basic principles of making and using explosive charges.

The basic charge consisting of one or two 4 or 8oz sticks of explosive required a detonator to fire it, this being either by a slow burning fuze, or a detonating fuze set off by a mechanical or timed device. A 'low speed' explosive, such as gelignite, could have its efficiency increased fourfold by the use of a suitable 'primer' such as a small amount of plastic (high speed) explosive or a knotted length of detonating fuze.

Detonators were small aluminium tubes, about 2in long and $\frac{1}{8}$ in wide, open at one end and containing a very sensitive high explosive which exploded when heated. Commercial Bickford safety fuze (beloved by John Wayne and film makers generally!) was inserted into the open end of the detonator, crimped on with a special tool and when lit, burnt at a speed of two feet a minute, allowing time to walk a short distance from the charge.

Under operational conditions, a detonating fuze would have been used. These were proprietary brands such as Cordtex or Primacord which looked like a silver or yellow electric wire and which contained a white explosive filling. Detonating fuzes could set off individual charges or be used in a 'ring main' to link a series of unit charges for major acts of

sabotage or demolition. On their own, they could be used to cut and ignite the tin petrol cans likely to be found in petrol dumps or vehicle petrol tanks.

Patrols were issued with large quantities of explosives. Plastic High Explosive (PHE) was only then becoming available, and, despite supply shortages Auxunits were favoured by a special issue of this, although its use in training was restricted to conserve supplies. The more common explosives were gelignite (which if handled with bare hands could produce a headache equal to a first class hangover!), blasting gelatine and Nobel's Explosive 808, with its distinctive smell of almonds. Some patrols had supplies of white 1lb gun cotton slabs, about the size of a thick paperback book. These had a central circular hole for the insertion of a purpose-made primer and detonator. Supplies of these were always sufficient to allow for their use in training, Auxiliaries practising their skills on disused railway lines and derelict vehicles.

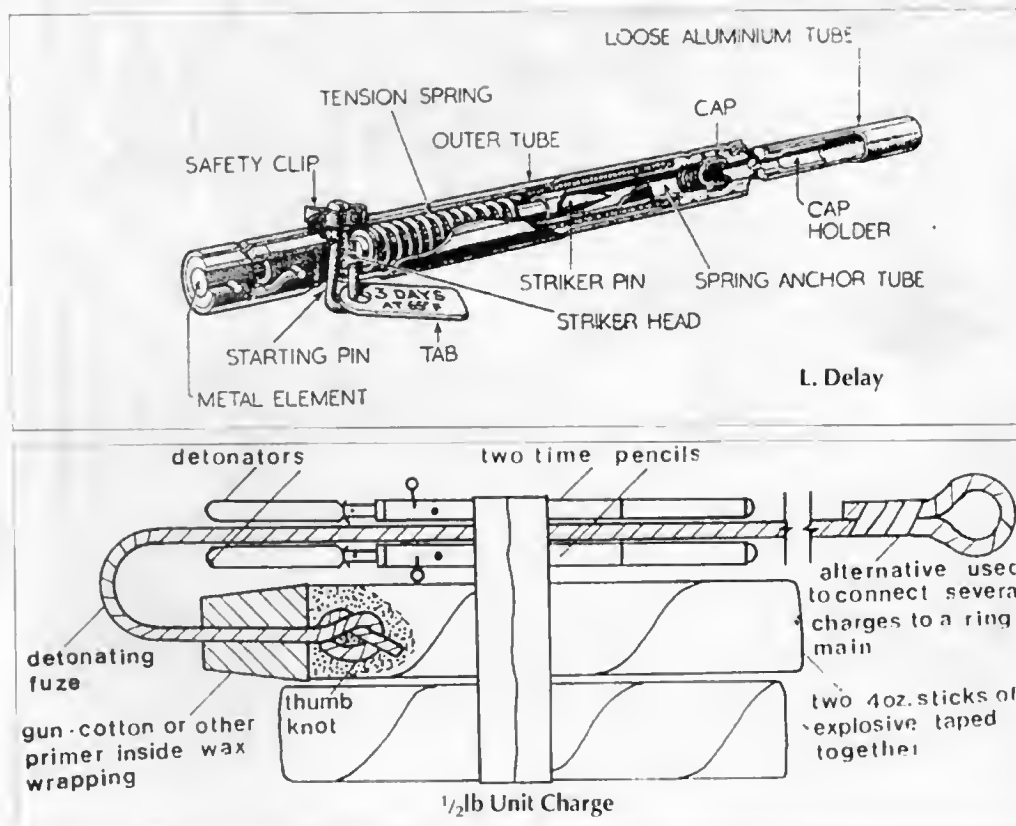
The nature of their activities dictated that Auxunits would not stay around to witness the results of their explosive charges, and therefore the lighted safety fuze was only used for practice, and other equipment was provided for operational purposes.

The first of these was the time-pencil. This looked like, and was not much bigger than a metal propelling pencil, one

end brass and the other end copper. The copper end contained a glass capsule of acid which, when the copper tube was compressed, broke, allowing the acid to eat through a fine copper wire, releasing a spring loaded striker which then hit a cap and detonator to explode the main charge. The copper wires were graded to provide five different time delays, varying from 30 minutes to 30 hours. Since the acid worked more slowly when cold, these times could vary by up to 80% and these pencils were notoriously inaccurate and unreliable. For this reason, Auxunits were instructed to use them in pairs and this was always done.

Another time mechanism was the L-Delay. This was invented by Churchill's 'think tank' team of 'Wheezers and Dodges'. Looking like a shorter and fatter propelling pencil, it consisted of a green painted metal tube containing a spring loaded striker and detonating cap. When the safety pin was removed, the tension spring pulled on a soft alloy metal element, which gradually stretched until it broke, releasing the striker. It was easier to use and less sensitive to damp than the time pencil and slightly more efficient. The time delays were less, varying from 15 minutes to 12 hours depending on the thickness and composition of the metal element and the operating temperature when used. **M**

To be concluded



AT THE END of the Civil War the burgeoning ranks of the Union Army began to shrink. By 1866, the Federal force went from over a million men under arms to an aggregate paper strength of but 60,000. Infantrymen were to comprise over half this number of regulars, with one of the 45 foot regiments being the 17th US Infantry (a unit raised in the wake of the firing on Fort Sumter, South Carolina). The organisation came into being on 4 May 1861 by direction of President Abraham Lincoln. Recruiting took place in Maine and New Hampshire while 'Poppenberg's Band' from Buffalo, New York, provided music for the regiment and even played at the White House.

Such posh duty gave way to four years of campaigning against Confederate troops, turning the outfit into battle-wise veterans. Originally composed of three battalions with eight companies each, an 1866

Infantry musicians serving with companies during the 1866-1872 period displayed additional sky-blue worsted lace on the front of their coats. Regimental bandsmen, on the other hand, often wore other types of accessories or uniforms because regulations allowed wide latitude in this instance. (Smithsonian Institution.)



'WALK-A-HEAPS'

Enlisted men's uniforms of the 17th US Infantry, 1866-1890

JOHN P. LANGELLIER

THE UNITED STATES cavalry of the post-Civil War period has always received the lion's share of attention because of its uncontested glamour. This article redresses the balance by examining the infantryman's uniform, insignia and accoutrements.

US Army-wide reorganisation witnessed the creation of the 26th and 35th Regiments from the second and third battalions.

In this form, the regiment went off to new posts. Some companies reported to Michigan but soon rotated to Kansas and Texas, in the latter instance performing 'Reconstruction Duty' as an occupation force. By 1869, yet another reorganisation combined elements of the 44th and 17th Infantry. The unit consolidated in Virginia where it stayed for a period before transferring to the Dakotas in 1870. The regiment remained for 16 years in this area, where they 'built and rebuilt' forts, provided wood and hay, carried mails and repaired roads in all types of

weather. They likewise served in an 1871 expedition to the Yellowstone; escorted Northern Pacific Railroad surveyors the following spring, and fought Plains Indians later that year. Some companies garrisoned Fort Abraham Lincoln alongside the 7th Cavalry. Eventually, men of the regiment joined Brigadier General Alfred Terry as part of the Big Horn Expedition of 1876. After that campaign, which included the defeat of George Custer along the Greasy Grass, other companies watched over Standing Rock reservation and later guarded Sitting Bull when he returned to the United States for confinement at Fort Randall. Thereafter, a period of quiet set in, until the regiment moved on to assignments in Wyoming Territory, beginning in the summer of 1886 where it soon took up residence at Forts Bridger and D. A. Russell. Wyoming remained home for some years thereafter.

Despite this impressive record, little has been written about the 17th, especially when compared to the various cavalry regiments of the post Civil War era. Even less attention has been paid to the uniform of these stalwart dough-boys. A synopsis of their outfit not only provides information about the 17th but also offers some fairly representative information about the attire issued to all infantry regiments of the period.

For the most part, the well dressed infantryman of 1866 differed little from his predecessor of the late war. To begin with, a black felt hat with ostrich feather and blue worsted hat cord topped the uniform. Other adornment included sheet brass devices which consisted of a bugle (the infantry insignia), national eagle coat of arms side piece, and unit designations for company and regiment. Originally



Portrait of Private William Zahn of Company G, 17th Infantry at Fort Yates, Dakota Territory. He wears a non-regulation hat in place of the government issue version, a not uncommon practice of the period. Otherwise, this is the uniform prescribed for formal occasions from 1866 through 1873. (State Historical Society of North Dakota.)

the hat was to be looped up on the left side, but by 1872 authorities granted permission to turn it up on the right side to accommodate the 'carry arms' and 'right shoulder shift-arm' movements called for by a revision to the drill manual. As this pattern of headgear did not enjoy great popularity, individuals sometimes replaced it with a privately purchased civilian slouch hat which could double for field and campaign purposes as well.

A single-breasted nine-button dark blue wool frock coat, trimmed with sky-blue piping on the collar and cuffs, served enlisted personnel for a variety of uses, including parades and more formal functions. For musicians, $\frac{3}{8}$ inch skyblue worsted lace was placed on a line with each button being $6\frac{1}{2}$ inches in length at the bottom, and then gradually broad-



Above left Hooks and eyes kept the brim folded in place on the 1872 pattern campaign hat. (Presidio Army Museum.) **Above right** The 1876-pattern campaign hat featured fans in the sides of the crown as a supposed means to keep the wearer cool. Some surplus 1858-pattern hat cords were worn with the hat but this accessory was not very popular with the rank and file, thereby being used infrequently. (Glen Swanson.)

ening as the lace went up the chest until the design contracted again so that the last row at the collar level measured the same as that of the waist. A strip of matching lace followed the bars at the outer extremities thereby creating what was called a 'herringbone' form.

White Berlin gloves covered the hands. Brass shoulder scales of three distinct patterns, to distinguish the other ranks, sergeants, and non-commissioned staff, formed another part of the regulation for dress wear, as did the unpopular leather neck stock, the latter item being discontinued by 1871.

For fatigue duties and campaign, a dark blue wool sack coat fitted the bill with its four eagle buttons on the chest. A high-crowned floppy forage cap was prescribed in tandem with the sack, and sometimes bore various types of branch insignia as well as regimental numerals and company letters, the last item being the only one officially called for by regulations. The chevrons which appeared on the sleeves of the sack also were prescribed for the frock coat. These were worn points down on each sleeve just above the elbow to indicate rank, beginning with two stripes for a corporal, three for a sergeant, and three stripes surmounted by a lozenge for a first sergeant. This system remained standard through the end of the century with other speciality ranks being added from time to time.

The chevrons were all of sky-blue worsted lace sewn on to a dark blue wool background to match the coat or directly on to the sleeve of the coat or jacket itself. Chevrons for the Regimental Quartermaster-Sergeant (three stripes with an arc

of three stripes above) were to be of silk. The three highest levels of non-commissioned officers, along with principal or chief musicians, likewise donned a scarlet worsted sash which wrapped about the waist twice then tied at the left hip with the worsted bullion fringe tassels hanging down at the side. Additionally, regulations authorised service chevrons for the frock coat to indicate the number of five-year enlistments completed by the wearer.

The $\frac{1}{2}$ inch-wide diagonal half chevrons were placed just above the point of the cuff and additional ones would be placed parallel to the first mark and just above it for each subsequent period of 'faithful service'. The colour of these worsted lace insignia corresponded to the branch in which the soldier served when he completed his tour of duty. Eighth-inch scarlet stripes on each side of the chevron denoted service in war.

For inclement weather a single-breasted sky-blue wool overcoat with short unlined cape was called for while the government issued a gum blanket or poncho which supposedly protected against precipitation.

In all instances, rain or shine, sky-blue wool kersey trousers were 'made loose, without plaits', and were 'to spread well over' the footwear (bootees or brogans of black leather). The outer seams were plain for privates but exhibited $\frac{1}{2}$ inch stripes down each leg for corporals and one and-a-half inch versions for sergeants, these being of dark blue worsted in all cases. This model of trousers remained standard until a new design was adopted in 1876.¹

These same individuals also

exhibited one more badge of authority, the 1840 pattern non-commissioned officer's sword. An over-the-shoulder belt with circular brass plate bearing an eagle motif provided the means to carry this sword and had an attachment for a bayonet scabbard in addition. Simple belt mounted frogs existed too. Musicians were authorised a similar sword which could be suspended from either a sling or frog. The remainder of the accoutrements included a black leather belt with oval brass US plate for the rankers and a similar belt with rectangular brass plate bearing an eagle and a separately applied German silver wreath for sergeants. A cap pouch and a cartridge box, worn on a cross-belt until metallic cartridges began to replace paper cartridges as muzzle-loaders gave way to breech-loaders, and a bayonet in its leather scabbard formed other accoutrements. Several types of haversacks, canteens, and knapsacks also were part of the kit when on the march.⁴

Almost all these surplus Civil War items would be swept away by the early 1870s, the .58-calibre rifled-musket being replaced by such arms as the Sharps rifle or the Springfield Allin conversion.⁵ In short order the newly manufactured .45-70 calibre 'trapdoor' (sometimes known as the 'Long Tom') would become the main weapon for the US infantry until replaced by the Krag-Jorgenson in the early 1890s.⁶

Along with improved rifles came a new assortment of equipment. At first, old style .58-calibre cartridge boxes underwent modification with the former tin liners for paper cartridges giving way to card-

board boxes of metallic shells, or sheepskin inserts, or to a pair of wooden blocks, one atop the other, each bored to hold 20 rounds. Some military men, including Anson Mills, saw the wisdom of replacing these cumbersome boxes with cartridge belts similar to those in vogue for civilians of the era. These items would see considerable field duty, ultimately being displaced by models fabricated in government arsenals.⁷ In garrison, McKeever and Hagner cartridge boxes remained the norm.⁸ Both the McKeever and the Hagner were worn on various belts that came into being during the early 1870s, brace systems presenting options in some cases on a limited, essentially experimental basis.⁹

Trowel bayonets followed a parallel short-lived trial before being abandoned for the more traditional triangular form.¹⁰ Finally, a rectangular brass US belt plate likewise began to make its appearance in the early 1870s, gaining wider favour as the Victorian era progressed.

By 1872, drastically revised uniform regulations likewise appeared, thereby keeping pace with the evolution of accoutrements. To begin with, a stiff cap covered in dark blue wool and trimmed in sky-blue mohair lace supplanted the infantryman's old hat. In the top of the crown, a japanned circular ventilator supposedly made the piece more comfortable in heat. A three-inch high, white conical wool pompon surmounted the cap while a diminutive eagle device went below this, as did a small sheet brass bugle. Photographic evidence indicates the company letter and regimental numerals



Top left: In 1881 a spiked helmet was introduced.
Centre left: The regulation 1858 pattern hat was not popular among the rank and file. Originally, it was worn with the brim pinned up on the left side but this was changed to the right in 1872.

Left: The 1872 cap with pompon. **Above:** The four-button sack coat and forage cap remained in use through the early 1870s as part of the fatigue and field uniform. Insignia varied from unit to unit and from time to time until being standardised in the 1870s.



Above left Taking its inspiration from British civilian hunting jackets, the 1872 pleated blouse was produced for fatigue and campaign wear, although it proved unpopular with rank and file. Sky-blue worsted cord trimmed the collar, yoke, and cuffs and nine brass 1854-pattern general service buttons appeared in a single row on the front. The subject in this photograph still appears with the old style over-the-shoulder cartridge box and 1839-pattern belt with plate, all of which soon gave way to newer models. (Smithsonian Institution.) **Centre** The 1874-pattern blouse for infantrymen was piped in light blue cord on the cuffs and collar and had five buttons down the front. **Above right** The 1872 dress coat and cap formed the basic components for the infantryman on formal occasions. From 1872 through 1875 a hunting horn was affixed to the front of the cap. Thereafter, regulations called for crossed rifles, the company letter, and regimental numeral in brass to appear on the cap while the regimental numeral was to be affixed to both sides of the collar facings. The belt and buckle shown here formed part of the 1874 Palmer infantry brace system. (Wyoming Archives, Museums and Historical Department.)

sometimes were affixed to the front although this practice did not become official until 1877.¹¹ Brass side buttons and a black leather chinstrap with brass slide completed the cap.

The same type of chinstrap and general service side buttons appeared on the new lower crowned 'chasseur pattern' forage cap adopted in 1872 while the unbound patent-leather visor likewise was the type found on the dress cap. At first, only the company letter was required on the new headgear but, by 1873, the bugle device from the dress cap, regimental numeral, and company letter would be added. This remained the case until 1875 when crossed rifles replaced the looped horn as the emblem for infantrymen.¹²

After that, the cap continued in use until a European-inspired

spiked helmet's adoption in 1881.

Neither of these types of headwear offered much protection from the elements. The new uniform regulations of 1872 attempted to rectify this situation by providing a black fatigue or campaign hat of mixed coney and muskrat. This item could be folded closed by means of hooks and eyes or worn with the brim open to shade from sun or rain. In theory, this represented a positive step. Practically speaking, however, the hat tended to lose its shape and disintegrate from exposure to weather and sun. Once more, some men took it upon themselves to buy civilian slouch hats, an expedient which continued in some instances even after the quartermaster department produced an improved wool campaign hat which featured a stiffer brim and

"Brasher" ventilators. In both the case of the 1872 hat and the 1876 hat as well, surplus 1858 pattern blue worsted hat cords could be worn, soldiers obtaining these at a cost of \$.07 each, in those instances when someone opted for these unnecessary accessories.¹³

Another addition to the uniform regulations which appeared in 1872 was the pleated blouse. A forerunner had been worn by some high ranking officers on both sides of the Mason-Dixon Line during the Civil War. The pattern for enlisted infantry personnel was dark blue wool with light blue wool worsted piping around the roll collar, cuffs, and across the yoke. Nine buttons of the type issued with the old frock coat adorned the chest. One small button accented the piping on each cuff.

Difficulty in maintaining

these blouses in a neat, military manner caused considerable negative comment from the soldiery. For this reason, a streamlined five-button version, with no plaits and without the cord on the yoke, was adopted in 1874. This item remained in service until 1883 when all piping was ordered removed.

One more major item added to the issue adopted in 1872 was the basque coat for dress wear. This garment resembled the old frock and, in fact, some surplus 1858-pattern coats were converted to the newer style which meant that old cuff trim had to be taken off and replaced with flashing of sky-blue facing cloth, while matching material was added to the tails and the front of each side of the collar as patches then extending back four inches. Brass regimental numerals were placed on this field of col-

lar facing. Piping down the front seam and around a pair of belt loops, one on each side, almost directly above the hips added to the appearance. In the latter instance, these bolsters supposedly helped to hold up the black leather belt and its brass buckle. A new style of herringbone emanating from the buttons on the coat's chest was also prescribed for musicians and bandsmen. In the latter instance, regulations allowed a great deal of latitude about not only the ornamentation of the coat but also the accessories for regimental band uniforms.

Some problem with the cut of the coat and the placement of the belt loops required a modified pattern to be made after 1876, although for all intents and purposes the outline and basic look of the piece remained the same until 1884 when gold lace chevrons were adopted. To that date, chevrons were of the same facing material as used for the dress coat but the stripes would be made by the use of black silk chain-stitching to separate each bar. Some individuals continued to obtain custom-made chevrons which had separately sewn stripes of sky-blue wool material placed on dark blue wool backing or directly on to the sleeve of the coat. This impracticity tended to disappear later in the 1870s when issue chevrons came into almost exclusive use. Once again, the chevrons went above each elbow on all the jackets and coats, with points down. The only exception was on the overcoat. Since capes obscured the wearer's rank, chevrons were to be placed above the cuffs. Because enlisted greatcoats remained light blue in colour, infantrymen's grades did not show up well, being almost of the same shade as the body of the overcoat. To compensate for this situation, dark blue facing with white

chain-stitching was prescribed for doughboys' overcoat chevrons as of 1876.

Five years later a helmet with spike replaced the cap with pompon for dress wear. The dress coat itself remained unchanged except for the fact that the belt loops and collar numerals were discontinued in 1884. Later in that same year a new style dress coat, which employed all white facings (including a collar completely faced in white), and gold lace chevrons with white backing in lieu of the previous sky-blue cloth pattern, came onto the scene. Once more, herringbone appeared on the chest for company musicians but not for the regimental band. In their special attire the band cut a distinct figure while continuing to enjoy a reputation as excellent performers. In fact, Civil War veteran Walt Whitman paid tribute to these virtuosos in a poem from his *Leaves of Grass* titled 'Italian Music in Dakota' ('The Seventeenth — the finest Regimental Band I ever heard').

Returning to the uniform, for field use, soldiers often procured fur caps, gloves, and buffalo overcoats, all items which, in the late 1870s, would be issued in extremely cold climates by the quartermaster as company property. The kersey overcoat itself was to be the same as provided during the late Civil War for mounted troops. Because insufficient quantities of the double-breasted coat were on hand in 1872, military authorities revised their order and called for a longer second cape to be added to the single-breasted foot pattern overcoat.¹⁴

In 1879, infantry capes were to be lined with dark blue facing material, by which point the idea of a second cape had been dropped and all coats for mounted and dismounted wear were double-breasted. By 1884, a new pattern double-

breasted overcoat with detachable cape became standard for the rank and file using small eagle buttons as a means of fastening the two components, a method which was abandoned for hook and eyes later in the decade.

Civilian footwear was another option for campaigning since the allegedly improved post-Civil War military shoe left something to be desired in terms of durability. On occasion, infantrymen obtained regulation cavalry boots too, which offered protection against brush and the like. When low quarters were used, the men sometimes pulled their socks over the trouser cuffs, leggings not being adopted until 1887 as regulation issue. Thus equipped and attired, the hard-marching 'walk-a-heaps' of the 17th Infantry completed their service in the West. **MI**

Notes

1. Captain C. St J. Chubb, 'The Seventeenth Regiment of Infantry' in Theo. F. Fodenbough and William L. Haskin, *The Army of the United States* (New York, NY: Maynard, Merrill, & Co, 1896), 634-642.
2. Captain J. Schindel, Company H, 5th Infantry to Adjutant General, 7 March 1872, and 3rd Endorsement from R. B. Marcy, President, Regulation Revision Board, Record Group 94, Adjutant General Correspondence Files, National Archives Microcopy M666, Reel No. 53.
3. In 1872, a new style of trousers were discussed but the cost of manufacturing the pattern proved more expensive than the previous cut. Consequently, no change was made for several years except for the adoption of facing cloth stripes in lieu of worsted tape after 1872.
4. While not definitive, Philip Katcher, *US Infantry Equipments 1775-1910* (London: Osprey Publishing, 1989), presents basic data about changes in the foot soldiers' equipage.
5. For example, according to an original ordnance inventory in the Frontier Army Museum at Fort Leavenworth, KS, Company H of the 37th Infantry carried their

Springfield rifled muskets until 19 February 1867 at which time they received the .52-calibre Sharp's 'New Model' rifle. In turn, the Sharps gave way to the Allin conversion on 28 September 1868, thereby establishing a pattern somewhat typical of that found in other infantry regiments of the period.

6. For a brief look at the evolution of this weapon system see John Langellier and Cameron Laughlin, 'Old Long Tom: A Collector's Historical Guide to the US Springfield "Trapdoor" Rifle 1866-1884, *Man at Arms* (September-October 1987), pp18-25.

7. The reader should review Douglas C. McChristian, 'The Model 1876 Cartridge Belt', *XXXIV Military Collector and Historian* No 3 (fall 1982): pp109-116, for a useful look at the evolution of cartridge carrying devices in the decade after the Civil War.

8. See J. Edward Green, 'Notes on the 1874 McKeever', *XXIX Military Collector and Historian* No 1 (spring 1977): pp40-41; 43, and James S. Hutchins, 'The Cavalry Campaign Outfit at the Little Big Horn', VII *ibid*, No 4 (winter 1956): p93 for information on the McKeever and the two patterns of Hagner pouches.

9. Ray Riling, 'A Description of the US Infantry Equipments Pattern of 1872', IX *Military Collector and Historian* No 4 (winter 1957): pp91-94.

10. See Bruce N. Canfield, 'The Evolution of the Post-Civil War US Bayonet', and J. Phillip Langellier, 'Digging In: Early US Army Entrenching Tools 1865-1895', *Man at Arms* (January-February 1984), pp23-30 and 40-45 for a synopsis of this topic.

11. General Order No 8, War Department, Washington, DC, 8 February 1877.

12. See General Order No 73, War Department, 10 July 1873 and *ibid*, No 96 19 November 1875, respectively.

13. For more about the headwear patterns available from 1872 through 1877 consult, Howell, *United States Army Headgear*, pp28-59, and 76 through 78.

14. Donald E. Kloster, 'Uniforms of the Army Prior and the Subsequent to 1872', Pt 1, XIV *Military Collector and Historian* No 4 (winter 1962): p104.

In this 1890 image taken at Fort D. A. Russell, Wyoming, the band once again leads off their comrades. By this time the Drum Major has switched to a white bearskin while a few of the other bandsmen who follow him no longer display the galloons on their sleeves. The bandmaster, at centre with the clarinet, has opted for an officer's uniform of the period, complete with buffalo hair plumed helmet. (Wyoming Archives, Museums and Historical Department.)





Above left Rear view of the 1872 pattern 'basque' coat adopted for dress purposes by the infantry. Note the tail facings and the belt loops. (Smithsonian Institution.)



Above right This principal musician's coat exhibits the regulation herringbone pattern adopted for the 1872 coat. Brass numerals were to be attached to the facing material patches on the collar to indicate the wearer's regiment. (Smithsonian Institution.)



Above left Otherwise the uniform remained relatively unchanged save for the introduction of a new pattern of trousers in 1876 and the adoption of gold lace chevrons in 1884, in this case the examples being general service stripes worn above the cuffs to indicate completion of a five-year period of enlistment. In that same year, collar numerals likewise were discontinued. (Glen Swanson.)



Above right Late in 1884 a new coat pattern came into existence for infantry enlisted personnel. All facings were to be white and the collar completely covered in the material in lieu of the piping and four-inch patches previously prescribed. Gold lace chevrons, here those of a Sergeant-Major, formed another part of this parade dress. (Smithsonian Institution.)

THE BRITISH ARMY

HIGH ON THE list of informative, well written and illustrated regimental histories must surely be Lieutenant-Colonel E.A.H. Webb's *History of the 12th (The Suffolk) Regiment 1685-1913*. Published by the London firm Spottiswoode & Co Ltd in 1914, Colonel Webb's work, in addition to a comprehensive coverage of the regiment's records, provides much detail as to uniform and insignia. The book, which is set out in a handy year by year format, contains numerous black and white illustrations. But of particular delight are a series of superb colour plates by artist P.W. Reynolds.

Titles of the regiment

1685, Raised at Norwich as The Duke of Norfolk's Regiment. The regiment was known by the name of its successive colonels until 1751.

1751, 12th Regiment of Foot.

1782, 12th (East Suffolk) Regiment of Foot.

1881, The Suffolk Regiment.

1959, Amalgamated with the Royal Norfolk Regiment to form 1st East Anglian Regiment.

1964, 1st Battalion, Royal Anglian Regiment.

UNIFORM

Details of the uniform worn just after formation (June 1686) are recorded in Richard Cannon's history of the 12th Regiment (published in 1848) and again repeated in Colonel Webb's work — broad brimmed hats, turned up on one side and ornamented with white ribbons, red coats lined with white, blue breeches, blue stockings, and high shoes with square toes. The pikemen wore white sashes round their waists and sword belts were brown leather.

In his first colour plate (1) P.W. Reynolds shows a private of a battalion company in the uniform as recorded for 1742. The roomy red coat has the skirts hooked back and showing the facing colour which is now yellow. Regimental lace edging the cuffs, lapels, pocket flaps and waistcoat, is at this time white with a yellow line. The three-cornered hat is trimmed with plain white lace and the ammunition pouch is supported by a wide buff leather belt worn over the left shoulder.

Also in Plate 1, the artist illustrates a grenadier, his musket slung over the right shoulder and legs 14 inches apart according to regulations (when on parade). Based on David Morier's painting (held in the Royal Collection at Windsor Castle), the grenadier wears the uniform as laid down in the

The Suffolk Regiment, 1685-1913(1)

Royal Warrant of 1 July 1751, his distinctive cloth mitre cap having the front in facing colour and bearing the King's cypher with crown above. The red flap has the universal White Horse of Hanover and motto 'Nec Aspera Terrent', the tuft being yellow and white. At the back, grenadier caps were required to be red with a turn up the same colour of the facings. Regimental numbers were embroidered on to the turn up. Equipment includes an animal skin knapsack (goatskin according to Colonel Webb), rectangular tin water bottle worn over the right shoulder and grey canvas haversack on the left.

Still with Plate 1 we move to the third figure — a grenadier of 1768, his uniform being in accordance with the Royal Clothing Warrant of that year — coat cut away at the front, waistcoat shorter and changed from red to white. Lace for the infantry had also changed, the 12th Foot now having 'bastion loops', white with yellow, crimson and black stripes. A significant change has occurred in the

RAY WESTLAKE

IN THIS FIRST of two articles we take a close look at the uniforms, equipment and insignia of what is now the 1st Battalion, Royal Anglian Regiment, from its formation to the outbreak of the First World War.

headdress — the cloth mitre cap having been replaced by one of black bearskin with a metal plate bearing the Royal Crest and motto 'Nec Aspera Terrent' in front. Note also the laced shoulder wings.

The light company officer's uniform seen in Plate 2 on the front cover was briefly described by Captain Elers upon his joining the regiment as a subaltern in 1796: — 'blue pantaloons, edged with scarlet, a scarlet waistcoat, ornamented with narrow gold lace, and hats covered with the finest black ostrich feathers, with a stand up feather, composed of red and black'. Captain Elers goes on to say: 'We [the light company officers] wore wings instead of epaulettes'. Note the two light company soldiers in the background — a similar headdress and uniform, the wings being

laced, waistcoats and pantaloons white. A private of a battalion company, for the same period as above, is seen in Plate 3. Note the difference in headdress and absence of wings.

On 1 May 1796 a Warrant was published ordering that the coats of all ranks were to be fastened down to the waist, thus keeping the waistcoats from view. In the following year a War Office Circular, dated 13 September, directed that in future hat feathers of both officers and men were to be red and white (red below); those for grenadiers plain white and for the light infantry, green.

In a General Order dated 4 February 1800 the cocked hat was discontinued and replaced by a lacquered felt cylindrical peaked shako (stovepipe) with brass oblong plate (Fig A).



Plate 3



Reynolds' next colour plate (4) (see page 30) shows in the foreground two officers for the period 1812-16. By a circular



Fig. A

letter dated 18 March 1812, a new false-fronted black felt shako was introduced, the 'general pattern' brass or gilt plates bearing (in the case of the 12th Regiment) the regimental number below the Royal Cypher (Fig B). Plumes were white over red for battalion companies; white for grenadiers; green for light infantry, and ornaments includ-



Fig. B

ed a black cockade at the left side (regimental button in the centre, grenadiers had grenades, light companies bugle horns) and plaited cords — mixed gold-and-crimson for officers, green in light companies and white for grandiers and men of hattalion companies. Grenadier caps were retained for ceremonial purposes only upon the introduction of the shako. Note the single epaulet of the captain (right) and the two gold wings of the light company officer (left). The ornament placed on the white turnbacks, according to one lace maker's notes, was 'crow's feet (gold) on yellow, filled scarlet'.

Note the oval ornament being worn on the swordhelt (Fig C). This gilt and silver plate was just under 4 inches in

height and was worn from 1799 to 1816 when replaced by the all gilt pattern seen in Fig D.

In Plate 5 (see page 30) P.W.



Fig. C

Reynolds illustrates the elaborate dress of the 1825-30 period. Three officers are shown in the foreground and each wears



Fig. D

the 'Regency' pattern shako introduced in 1816 as a direct result (it is said) of the international rivalry in dress between the Allies during the occupation of Paris after Waterloo. Note the tall (12-inch) plumes, once again following the same colours for battalion, light and grenadier companies as before. The officer in undress order on the left wears his headdress (plume removed) with a protective canvas bag. A silver and gilt star plate was worn (Fig E).

During this period Colonel Webb records that officers of the 12th Regiment had to provide themselves with four kinds of trousers — 'blue grey, for winter, white for summer, and in each case, laced (1 3/4-inch gold) for full dress, and plain for undress'. Note the skirt ornament seen in the right hand figure. This handsome piece is described by Colonel Webb as 'a gold embroidered star, richly spangled, on scarlet cloth, gold "12" raised on scarlet, and sil-



Fig. E

ver "Gibraltar", on a blue garter'. (Fig F.)

Unseen in the illustration are the black patent leather waistbelts, which according to Colonel Webb are worn by cap-



Fig. F

tains and subalterns only. Just under 1 1/2 inches wide, the belts were fastened by a dead gilt plate with silver numbers (Fig G).

The breastplate seen is that introduced in 1825 and worn until 1842. Approximately 4 x 3 1/4 inches, the plate is gilt with silver star (Fig H).



Fig. G

The next plate (6) (see page 30) is dated 1834 and shows an officer and men of a battalion company, and light company sergeant; all in summer dress (1



Fig. H

May-14 October inclusive). The headdress is that authorised by a Horse Guards circular dated 22

Fig. I



December 1828 and later detailed for the first time in the Dress Regulations of 1831. Reduced in height, the new shako had no lace and bore a large star plate, silver and gilt for officers, gilt for men. Two plates for the period are known — Fig I (battalion companies) and Fig J



Fig. I

(light companies). Grenadiers at this time, according to Colonel Webb, were wearing bearskins. Cap lines were worn only for parades — the officers having gold while other ranks wore white (battalion companies) and green (light companies). Note the plumes (now all white for battalion companies and later changed to worsted ball-tufts) and the light infantry green ball tuft (introduced in 1830).

A new coatee is also seen, the buttons being placed in pairs and a slashed flap on the skirts with four loops and large buttons, white kerseymere turn-backs and skirt lining, skirt ornaments for rank and file being a regimental button for the battalion companies, and a metal grenade and bugle-horn for grenadiers and light infantry respectively. Note the officer's

epaulettes, all ranks of officers now wearing two, and the sergeant's yellow and red sash (introduced in 1825).

In 1834 forage caps made from blue cloth, peaked and with black silk oakleaf band, were introduced for officers. The regimental number, 11¹/₂ inches high and embroidered in gold, was worn at the front. Above the numeral grenadiers wore a small grenade while the light infantry had bugle horns.

In battalion companies, Colonel Webb records, the rank and file wore ('as far back as 1841') a crown.

The regimental lace worn by the rank and file was abolished in 1836 and replaced by plain white tape.

In 1843 a new shoulder-belt plate was introduced for wear by officers (Fig K). The oblong plate (4 x 3¹/₄ inches) was bur-



Fig. K

nished gilt with (except for the crown which was also gilt) silver mounts and was the last pattern to be worn by the regiment. **MI**

Plates 4, 5 & 6 overleaf

Video releases to buy:

Target for Tonight (DD Distribution)

The True Glory (DD Distribution)

The Forgotten Bomber (DD Distribution)

The Wing Must Fly (DD Distribution)

NEW RELEASES from DD Distribution include two important World War II documentaries. During the early part of the war, it was raids by Bomber Command, above all else, that were seen to be striking directly at Germany. It was therefore inevitable that the Crown Film Unit would make a film concerning such raids which had both boosted public morale and were seen as just retaliation for the Blitz. Harry Watt, whose credits had included shorts like *The First Days*, *Squadron 992*, *London Can Take It*, *The Front Line* and *Britain of Boy*, was assigned the job of both writing and directing. Preparation for the former entailed reading over 2,000 pilots' raid reports.

Target for Tonight was originally conceived as a two-reel short, but was expanded to 50 minutes. The RAF allowed location shooting at Mildenhall airfield (called Millington in the film) from which operated the twin-engined Vickers Wellington bombers. An aircrew of six, led by Squadron Leader 'Pick' Pickard, were released to take part in the film. In addition, a Wellington fuselage was sent to the studios outside London for the interior shots. Most of the film, best described as a drama-documentary, was thus shot in the studio.

The film follows the progress of a night raid by a squadron of Wellingtons on an oil storage depot at Freihausen. Interest is centred on the crew of 'F for Freddie', from briefing through the actual raid and the return home. Shots of anti-aircraft fire

appear to be real but those showing the destruction caused as the bombs hit their targets are clearly model-work.

The film was given considerable publicity and in many instances became the main feature in cinemas where it was shown. *The Daily Express* both serialized the story and issued it as a separate booklet. However, some audiences were disappointed, having been led to expect a more dramatically satisfying film.

Nonetheless, *Target for Tonight* is an important film, particularly as all the parts were played by genuine RAF ground and aircrew. By the end of the war most of 'F for Freddie's' crew had been killed in action. Squadron Leader Pickard was himself killed in the famous Mosquito raid on Amiens prison in 1944.

The True Glory, a co-production between the British Ministry of Information and the United States Office of War Information, was intended to be the definitive documentary covering the campaign in Western Europe from D-Day to the fall of Berlin. It was directed by Carol Reed and Carson Kani, who made most of the film in the early months of 1945, finally completing it as film of the fall of Germany became available.

Although the film told the story of a massive campaign, it was also intended to be a tribute to the ordinary fighting man. To this end the commentary consists of words spoken by actors as if they were real servicemen. Each sequence is introduced by a narrator who uses blank verse to provide a more strategic overview.

The directors were able to draw on over 6¹/₂ million feet of film shot by over 700 front-line cameramen. Thirty-five had been killed,

101 wounded, and a further 16 reported missing in action. The film covers D-Day, the Falaise Gap, Caen, Arnhem, the liberation of Paris and the fall of Berlin. Most of the footage was American, but some of the most remarkable shots, filmed in Paris by Mejato and Gaston Modin, were first seen in the documentary *Journal de la Résistance*. This 80-minute film features an excellent score by William Alwyn, and ends with Drake's prayer, uttered on the eve of his encounter with the Armada, which gives the film its title.

The Forgotten Bomber is a documentary made for Anglia TV about the Bristol Blenheim bomber. The film explains how the prototype, called *Britain First*, was built by Bristol in 1935 for Lord Rothermere, the proprietor of the *Daily Mail*. Most of the film deals with the various roles the aircraft played in all of the main theatres of the Second World War. The fact that it was gradually superseded by other aircraft led to it being dubbed 'The Forgotten Bomber'.

The video concludes with footage of the Blenheim (or more correctly its Canadian variant, the Bolingbroke) which was carefully restored over 12 years by Graham Warner. Unfortunately the aircraft was written off at an airshow, apparently the result of the pilot irresponsibly performing unrehearsed manoeuvres for which permission had not been given by the owner. Warner and his Duxford-based team now hope to restore a second Bolingbroke within a further five years. The video, which includes interviews with former Blenheim pilots, is highly recommended for veteran military aircraft buffs.

Aircraft enthusiasts will also enjoy *The Wing Must Fly*, an

American documentary about Jack Northrop and his dedication to designing what were popularly known as 'Flying Wings'. There is plenty of footage of these extraordinary aircraft in flight, from the tiny N-1M to the massive jet-propelled RB-49. Consideration is given to fatal test flights, allegedly the result of sabotage by competitors for lucrative government contracts. Although the basic design concept appeared to be abandoned in the 1950s, it was to reappear years later in the form of the B2 Stealth bomber.

Video releases to rent

Navy Seals (Virgin: 15)

The opening credits of Lewis Teague's *Navy Seals* (1990) inform us that this élite unit was created by John F Kennedy in 1962 on the assumption that most future conflicts would be counter-terrorist in nature. The film concerns two members (Charlie Sheen and Michael Biehn) of a Seal team which is ordered to eliminate an Arab terrorist responsible for the shooting down of a US Navy helicopter, and to destroy the Stinger missiles in his possession. Both are attracted to the glamorous American-Lebanese television journalist (Joanne Whalley-Kilmer) who is finally persuaded to reveal some vital intelligence.

The clichéd script does not permit the stars anything more than the most superficial characterisation. The Sheen character is shown to be responsible for the death of a colleague, but redeems himself by rescuing his team leader in the climactic firefight. Director Teague brings some life to the action sequences, especially those set in war-torn Beirut, but overall this is a juvenile offering in the dispiriting tradition of *Top Gun* and *Delta Force*. For unrepentant action fans only.

Stephen J. Greenhill

ON THE SCREEN



Above left Reynolds' Plate 4 showing two officers of the Suffolk Regiment circa 1812-16 watching a march-past. See text for description.



Above right Reynolds' Plate 5 illustrates the elaborate dress of the 1825-30 period; the three Suffolk Regiment officers are wearing the 'Regency' pattern shako with 12-inch plume.



Right Reynolds' Plate 6 depicts an officer and men of a battalion company of the Suffolk Regiment, and light company sergeant, dated 1834.

'LOBSTERS'

17th century cuirassiers

PHILIP J. HAYTHORNTHWAITE

Painting by G.A. EMBLETON

BEGINNING OUR series of special 350th anniversary articles on the 'English' Civil Wars, we examine the armour and accoutrements of the cuirassier, virtually the last of the true 'Knights in armour'. Future articles over the next months will examine the rival armies and such diverse subjects as the matchlock and making your own reproduction leatherware.

THE TERM 'cuirassier' usually conjures up the image of Napoleon's heavy cavalry, or less specifically the 18th- and 19th-century continental European trooper, equipped with an armoured breast- and backplate or 'cuirass'. In origin, however, the term is much older: and though British cavalry of the 18th and 19th centuries rarely wore body armour (and in only one case was the term 'cuirassier' used in a unit title), the true cuirassier was seen on English battlefields in an earlier age, although even then he was different from his counterpart in continental Europe.

The cuirassier was a logical progression from the armoured 'knight' or man-at-arms of the Middle Ages. The assertion that the increasing use of firearms was the nemesis of the 'knight', whilst retaining some validity, requires qualification; for although the use of full plate armour declined rapidly during the later 16th century, it was replaced by a hybrid: the cuirassier armour.

From the end of the 16th century to the Thirty Years' War, the cuirassier was the most impressive warrior in mainland Europe. 'Half-armour' (though not a precise term) is perhaps the most convenient description of the development of the 'knight's' equipment to that of the cuirassier's: a helmet (initially at least a 'close helmet' completely enclosing the head), breast- and backplates, armoured protection for the arms and upper legs, the helmet and breastplate at least being of sufficient strength to turn a pistol ball or even one from a musket. In addition to their armour, cuirassiers were equipped not only with a sword but also with firearms: invariably pistols and

sometimes a carbine or light musket (although the latter was more common for lighter-armoured cavalry, often styled 'harquebusiers' after their gun).

Cavalry tactics of the first half of the 17th century were based on two styles of offence: the Dutch or *Reiter* tactic, in which a regiment advanced in about six ranks, each of which discharged its firearms at the enemy and then retired to allow the following ranks to do likewise, until the enemy was sufficiently disordered to allow a final charge with the sword; and the Swedish tactic, by which the regiment in about three ranks charged home with the sword immediately, reserving its firearms for the pursuit of the broken foe. The Swedish tactic eventually predominated, and during the English Civil War (under the influence of Prince Rupert) became almost universal.

In both styles the armoured cuirassier was a formidable warrior, and in continental Europe was employed in large numbers (perhaps the most famous being Papperheim's cuirassiers in the Thirty Years' War), the charges of these iron-clad regiments recalling the 'knights' of the high Middle Ages.

Perhaps the best description of cuirassier equipment is that given by John Cruso in his *Militarie Instructions for the Cavall'rie* (Cambridge, 1632), in which he differentiates between the two types of heavy cavalry, cuirassier and 'lancier', the latter having an even closer resemblance to the mediaeval knight in that his principal weapon was a lance. Cruso remarks that the cuirassier 'is of late invention: for when the Lanciers proved hard to be got-



A Royalist cuirassier of the English Civil War, wearing a continental style of armour, including leg-defences which overlap the boots, instead of the more usual style. The helmet is an intermediate type between the vizored close helmet and the open 'pot', having a peak and face-bars. The red waist sash proclaims his allegiance, but red may simply have been the national colour rather than 'royal'.



A fully-equipped cuirassier loading his pistol, holding the ball in his mouth until inserting it in the barrel. Engraving after Cruso's *Militarie Instructions*.

ten... the Cuirassier was invented, only by discharging the lancier of his lance'. The main reason was that as the lancier 'was first invented to pierce and divide a grosse body', he required 'force and velocitie for the shock' and thus stronger and swifter horses. Such horses, which had to be 'exceeding well exercised', were not available in sufficient quantities; in addition there was the 'scarcitie of such as were practised and exercised to use the lance, it being a thing of much labour and industry to learn. (Another, if not the chief reason, why the Lances were left, is because they are of no effect, or use, but in a straight line, and where they may have leisure and room for their careers: whereas the Cuirassier is not subject to either of those inconveniences'.)

Thus, Cruso's descriptions of the Lancier and Cuirassier may be combined to depict the fully-accountred cuirassier:

'...a close casque or head-piece, gorget, breast, pistoll proof (as all the cuirasse in every piece of it) and calliver proof (by addition of the placatte) the back, pouldrons, vanbraces, 2 gauntlets, tassets, cuissets, culets, or guard-de-

rein, all fitting to his bodie: A good sword (...very stiffe, cutting, and sharp pointed) with girdle and hangers, so fastened upon his cuirasse as he might readily draw it: a buffe coat with long skirts to weare between his armour and his cloathes... two cases with good firelocks, pistols hanging at his saddle, having the barrell of 18 inches long, and the bore of 20 bullets in the pound (or 24 rowling in)... He is to have a boy and a nagge... to carry his spare arms; and oat sack, and to get him forrage. His saddle and bit must be strong, and made after the best manner. He is also to weare a skarf... He is to have his bridle made with a chain, to prevent cutting; and he must be very careful to have all his furniture strong and useful'.

To 'translate' the above: the 'casque' described was a closed helmet with vizor to encase the head completely; the gorget was the neck-protection connecting the helmet with the breast- and backplates. The 'pouldron' was an articulated shoulder joint, and the 'vanbrace' the forearm protection; 'tassets' and 'cuissets' were articulated guards for the thigh, with armoured knee-joints, and the 'cutlet' an articulated 'skirt' attached to the bottom edge of the backplate to protect the rear of the wearer's nether regions. The 'placatte' was an additional plate over the breast to give a double thick-

ness protection to turn a musketball. (The lance was stated to be ideally 18 feet long — thus able to meet a pikeman on even terms — but Cruso notes 'how any man (so laden with arms) should be able (with one hand) to wield a lance of 18 foot long, I leave to the consideration of the judicious'. This seems to prove how redundant was the lance by the date of Cruso's treatise, even though it enjoyed a revival in shorter and more wieldy form later.

Cruso echoes an earlier publication, Gervase Markham's *Souldiers Accidence* of 1625, which states that 'The first and principall troop of horsemen, for the generality, are now called cuirassiers, or pistoliers, and these men ought to be of the best degree, because, the meanest in one of these troops, is ever by his place a gentleman, and so esteemed. They have for defensive armes, gorgets, curats, cutases, which some call culets, others the *guard de reine*, because it armeth the hinder parts, from the waste to the saddle crotch, then pouldrons, vambraces, a lefthand gauntlet, taces, cuissets, a caske, a sword, girdle and hangers. For offensive armes, they shall have a case of long pistols, firelocks (if it may be), but snaphaunces where they are wanting; the barrels of the pistols should be twenty-six inches long, and the bore of thirty-six bullets in the pound, flask, priming box, key and mouldes...' (Markham's reference to the different methods of firearm-ignition relates to the superior 'firelock' [flintlock],

preferred wherever possible to wheel-locks or snaphances, which were 'too curious and too soone distempered with an ignorant hand'. Markham's 'curat' is a cuirass, and 'taces', tassets.)

Due to the weight of the armour, the cuirassier's horse had to be large and powerful. The 'Great Horse' or 'Black Horse', the mount of the medieval knight, well over 16 hands in height, is shown in Civil War portraits but was probably very rare and costly, explaining in part the decline of the cuirassier. (Cromwell offered '60 pieces' for 'A Black won in battle', as against 20 pieces for a dragoon cob'.

Two patterns of saddle were used, first the 'Great Saddle' (for use with the 'Great Horse'), weighing up to 60lb and with 'an ample stuffed seat, with the pommel rising well in front... a high well-padded cantle extending round the sides to support the thighs like the body of a well-padded library chair'. This seems to have been used exclusively by cuirassiers, and is mentioned as late as 1661.

Then there was the 'Norocco' saddle (styled 'Perfite' by Markham), a lighter version reduced in height but still supporting the back, thighs and knees, with more room at the seat. Although the heavy

'Present & give Fire': a cuirassier discharging his wheel-lock pistol, held with lock uppermost to assist the transmission of spark through the touch-hole into the barrel. Engraving after Cruso's *Militarie Instructions*.



saddle could be decorated with brocaded fabric and metallic lace, its function was 'to be handsome, made with advantage, fit for the rider, to keep him firm against the violence of a shock', hence the supporting 'arms' which held the legs firmly.

As Markham states, the majority of cuirassiers were drawn from the upper echelons of society due to the expense of the equipment. For a new set of cuirassier armour, a price was established officially in England in 1629:

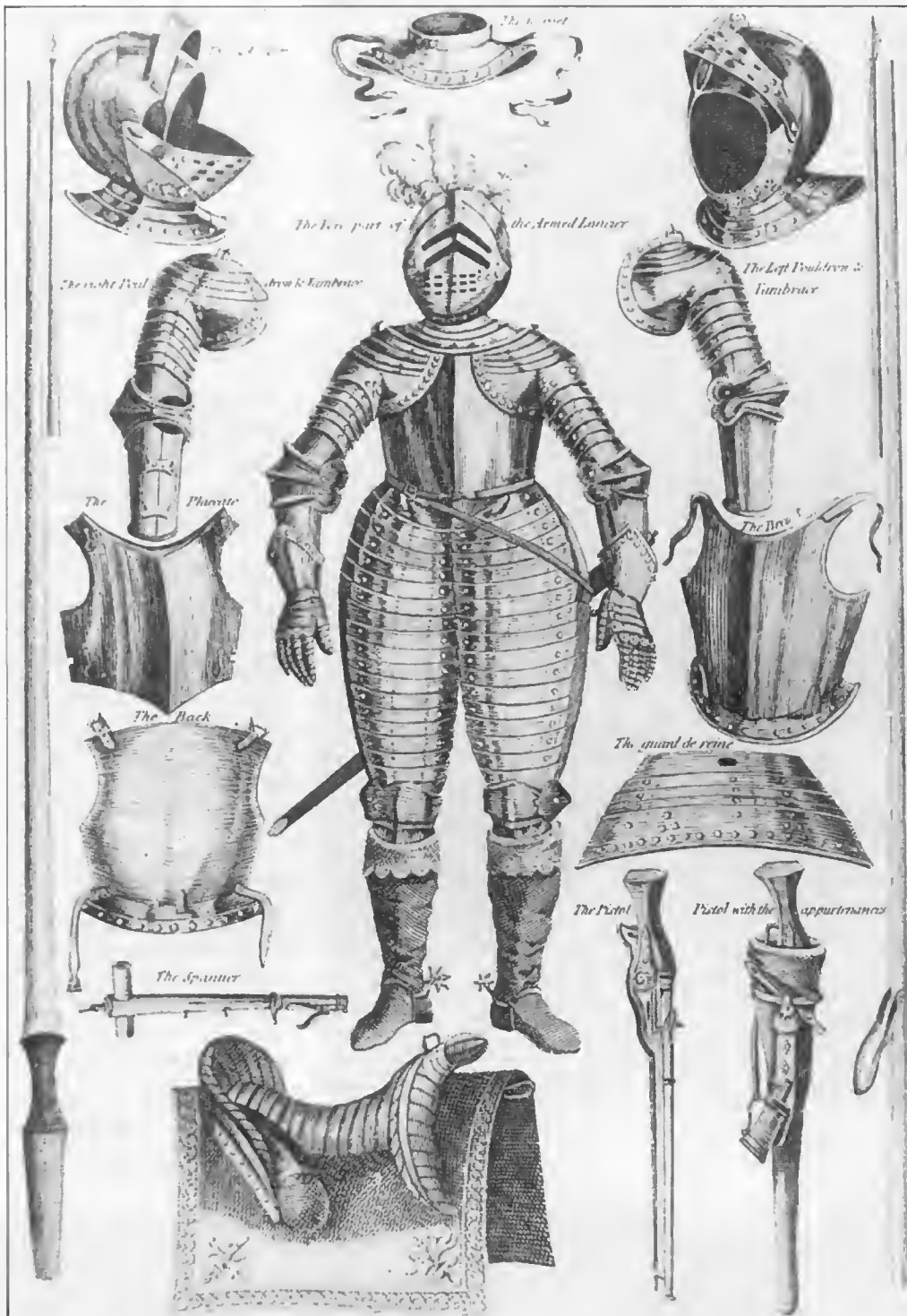
	s.d.
'breast of pistoll prooffe	xi o
backe	vii o
close caske lyned	xvii o
payre of pouldrons	xii o
payre of vambraces	xii o
payre of guissets	xvii o
cullet or guarderine	vii o
gorget lyned	iii vi
gauntlett gloved	iii vi

'Soe the price of the whole cuirassier's armour amounteth unto iiiii x o' (£4/10/-). This was a very considerable expense when compared to the price of an ordinary cavalry trooper's equipment, £1/12/-, which price was usually reduced by at least 3/- by omission of the gorget.

Much cheaper was the refurbishing of old suits (which must have been a frequent occurrence at the outbreak of the English Civil War as family heirlooms were dusted off and brought into service): 'For unstriking, new fyling, russetting, new nayling, leathering and lyning of a cuirassiers armour: £i iii o' (£1/3/-)'.

'Russetting' in the above refers to the browning of the metal to create a rustproof surface; equally common for use on 'active service' was the painting of armour to produce a black finish for the same reason. A few accounts exist of the use of polished armour on campaign at this time: for example, Charles I is recorded as wearing 'bright armour' at Leicester¹⁰, and just before the siege of Hull the Prince of Wales appeared at York wearing 'a very curious guilt armour' and riding a white horse caparisoned with velvet 'all studded with burning waves of gold'¹¹.

Probably the most decorative armour actually worn in the Civil War was the black-enamelled variety with gilt decoration, as shown (for example) in William Dobson's portrait of the young Prince of Wales; such armour would have been restricted to the highest ranks, most of whom would doubtless have preferred armour which was less distinctive in action.



The complete cuirassier armour, including lance: engraving by N.C. Goodnight after Cruso's Militarie Instructions. Note at the left the plastron or breastplate-reinforcement; the spanner was used for 'spanning' (ie. cocking) the pistoll.

The artistic tradition which dictated that generals and kings should be portrayed in full armour — a practice which lasted into the 19th century — can be misleading when contemporary portraits are used as references for the prevalent styles of military costume: for example, it appears that two portraits of Monck by Michael

Wright, two of Charles II by Samuel Cooper, and one of the Earl of Manchester, probably all depict the same, very distinctive, armour, which was probably an artistic 'prop'¹².

Some important variations on cuirassier armour were common in England. The lower leg was almost always encased in a leather boot (though armour could be worn inside the boot), and old-fashioned leg armour was rarely seen; though doubtless it did exist, as confirmed by the portrait of Colonel Alexander Popham of Littlecote, whose black cuirassier armour included an articulated knee joint, com-

plete covering for the shin, and armoured shoes with 'prick-spurs' attached.

Full cuirassier armour included two articulated iron gauntlets, but (as Markham noted) it was more usual to wear an armoured gauntlet on the left hand only, the right (sword) hand having instead a long glove of stout buff leather. The biggest change from the classic armour, however, was in the substitution for the closed helmet of either an open-fronted helmet with face bar, or the so-called 'pot' helmet worn by the lighter cavalry, with an articulated 'lobster-tail' neck-flap, iron ear-flaps fastening



A set of 'half-armor', with the popular modification of the substitution of a 'pot' helmet for the close-helmet. (Wallis & Wallis.)

A cuirassier helmet with the popular substitution of the vizor for a peak and face-bar. (Wallis & Wallis.)

under the chin, and a peak with moveable face bar. Due to the greater comfort of this style, it is likely that they were far more common in the Civil War than the old vizored close-helmet.

A further item of 'uniform' which was almost universal

was the sash (the 'skar' mentioned by Crusoe), from which the wearer's allegiance could be discerned; though far from universally the case, it was common for Royalists to wear red or rose-pink sashes and Parliamentarians 'orange-tawny', although it is conceivable that the latter applied only to the army of the Earl of Essex, whose colour it was. This and similar 'field signs' were the only method of distinguishing friend from foe on the battlefield.

Decent-quality armour was at least 'pistol-proof', and cuirassier armour (being the most expensive) almost universally so, breastplates often bearing a deliberate dent where the armorer had fired a pistol-ball to prove its efficacy. Sir James Turner wrote that the armour which was not bullet-proof, 'with the Bullet pierceth through, or beats the Iron into the Horseman's body, which is equally dangerous; but it be proof, it is exceeding troublesome to both man and horse'¹¹; and it was this great weight as much as the cost which led to the abandonment of cuirassier armour during the English Civil War.

Typical was the reaction of Sir Edmund Verney in 1639 when he was expected to take the field dressed as a cuirassier, but refused, 'for it will kill a man to serve in a whole Curass. I am resolved to use nothing but back, brest and gauntlet; if I had a Pott for the Head that were Pistoll prooffe it maye bee I would use it if it were light'¹². (Ironically, Verney appears to have had a premonition of death before Edgehill and was killed wearing neither armour

nor even buff-coat.) Probably the most common use of cuirassier armour during the Civil War was in the detaching of the breast and back plates for use with buff-coat and lighter helmet, which may explain why some extant suits lack these pieces.

In the early stages of the Civil War, both sides found great difficulty in procuring weapons and armour, so that in 1642, as Clarendon wrote, 'officers had their full desire if they were able to procure old backs and breasts and pots, with pistols or carbines for their two or three first ranks, and swords for the rest; themselves... having gotten, besides their pistols and swords, a short pole-axe'¹³. The use of cuirassier armour was restricted to officers or gentlemen-troopers who possessed their own, though in some cases those who owned several sets donated them to the troops they supported; thus when Richard Atkins formed his troop his men were 'almost all of them well armed, Master Dutton giving me 30 steel backs, breasts and head pieces, and two men and horses completely armed'¹⁴. Thus, among his 60 ordinary troopers, at least two were apparently equipped as cuirassiers, and his additional 20 gentlemen-troopers may have included others. (The 'pole-axe' mentioned by Clarendon was probably a spiked war-hammer on a staff, though its use was probably almost as limited as was the lance, save in the King's body-

'Pot' helmets: with triple-bar face-guard and hinged peak (left), and sliding nasal-bar with fixed peak and fluted skull (right). (Wallis & Wallis.)



guard of Gentlemen-Pensioners, for whom it was a symbol of office).

Despite its weight, the efficacy of cuirassier armour was undoubted. At Edgehill, the Prince of Wales and his young brother (later James II) were put in great danger from a Parliamentary cuirassier, who 'being armed cap-a-pe, I could doe noe execution upon him with my sword, att which instant, one Mr. Mathewes, a Gentleman Pensioner, rides in, and with a pole-axe immediately decides the businesse...'¹⁷ The Earl of Northampton was dismounted and surrounded by enemies at Hopton Heath, refusing to accept quarter 'from such base rogues and rebels'; impervious in his cuirassier armour to all blows, he was only 'slain by a blow with a halbert on the hinder part of his head' after 'his headpiece was tricken off with the butt-end of a musket'¹⁸.

There were, however, two complete units of cuirassiers which served in the Civil War, both on the Parliamentary side. One of these was the troop of the Earl of Essex's Lifeguard, a unit not exactly distinguished at Powick Bridge when, 'not understanding the difference between wheeling about and shifting for themselves... retired to the army in a very dishonourable manner'¹⁹. One of its members, Edmund Ludlow, criticised their complete armour: at the night of Edgehill the armour was so cold that he had to stamp up and down all night to prevent freezing, and when unhorsed 'could not without great difficulty recover on horse-back again, being loaded with cuirassier's arms'²⁰, which seems to prove James I's assertion that armour was an excellent invention in that it saved the life of the wearer and prevented him hurting anyone else!

The other cuirassier unit was that led by Sir Arthur Haselrig (or Heselrig) a noted Parliamentarian. His regiment, 'which were so prodigiously armed that they were called by the other side *the regiment of lobsters*, because of their bright iron shells with which they were covered, being perfect curaseers; and were the first seen so armed on either side, and the first that made an impression upon the King's horse, who, being unarmed, were not able to bear a shock with them; besides that they were secure from hurts of the sword, which were almost the only weapons the others were furnished with'²¹.

The Earl of Essex, whose cuirassier armour has been reduced to a more practical minimum: breast and back plates, gauntlet and vizored close-helmet. (Engraving by Wenceslaus Hollar, 1644.) The helmet is included simply to emphasize the nobility of the subject.

At Roundway Down, however, the defeat of Haselrig's regiment may well have been due to the weight of the cuirassier armour, making them incapable of facing an incoming attack due to their lack of manoeuvrability²². However, Roundway Down also provided another example of how efficient a defence was cuirassier armour, when Haselrig himself was assailed by the Royalist captain Richard Atkyns, who described the fight:

'... he discharged his carbine first... and afterwards one of his pistols... I then immediately struck into him, and touched him before I discharged mine; and I'm sure I hit him, for he staggered... in six score yards I came up to him, and discharged the other pistol at him, and I'm sure I hit his head, for I touched it before I gave fire, and it amazed him at that present, but he was too well armed all over for a pistol bullet to do him any hurt, having a coat of mail over his arms and a head-piece (I am confident) musket proof. His sword had two edges and a ridge in the middle... I came up to him again... and tried from head to the saddle, and could not penetrate him, nor do him any hurt.'

At this juncture Atkyns struck at Haselrig's horse, and Atkyns' cornet 'went up to him with great resolution, and felt him



*Cuirassiers in combat: a good representation of a fight between bodies of cavalry. (Engraving by Jacques Callot from *Misères et Nalheures de Guerre* (1633).)*



before he discharged his pistol, and though I saw him hit him, 'twas but a flea-biting to him... and upon the faltering of his horse his headpiece opened behind, and I gave him a prick in the neck... then came in Captain Buck a gentleman of my troop, and discharged his pistol upon him also, but with the same success as before, and being a very strong man, and charging with a mighty hanger, stormed him and amazed him, but fell off again...'

As Haselrig's horse was stumbling, Sir Arthur asked Atkins, 'What good will it do you to kill a poor man?', whereupon Atkins asked him to surrender 'and bid him deliver his sword, which he was loathe to do; and being tied twice about his wrist, he was fumbling a great while before he would part with it'; but this delay allowed a Parliamentary troop to ride up and rescue Haselrig. When this story was recounted to Charles I, it prompted the King to make one of his rare jokes: 'Had he been victualled as well as fortified, he might have endured a siege of seven years!'²³

Roundway Down was probably the last occasion in which cuirassiers fought as a body; indeed, George Monck in *Observations upon Military and Political affairs* (London, 1671, but written in 1644) discounted the cuirassier almost entirely due to their ponderous weight, 'because there are not many countries that do afford Horses fit for the Service of Cuirassiers'²⁴. The course of the armoured 'knight' was finally run.



Sir Thomas Fairfax wearing cuirassier armour; note the armour inside the boot. (Engraving by Englehardt after Bowers; York City Art Gallery.)

24 Monck p25.

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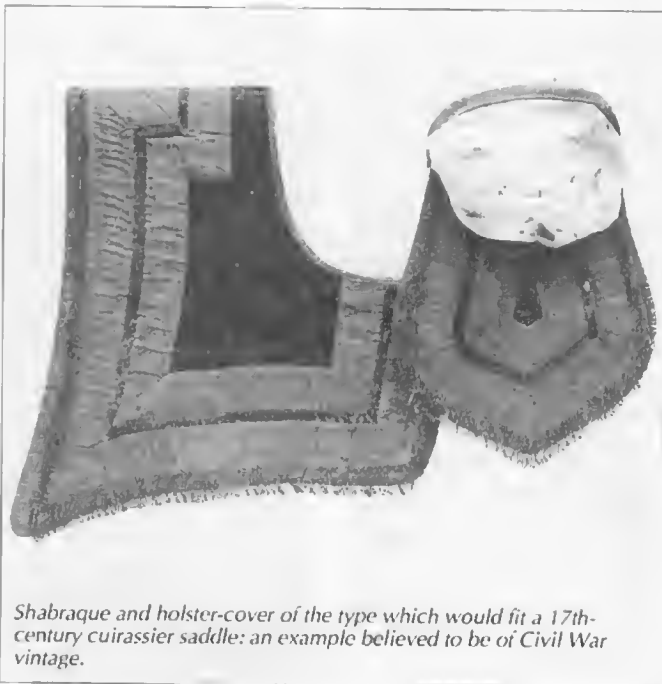
19 E. Ludlow, *Memoirs of Edmund Ludlow*, ed C.H. Firth, Oxford 1894, p18.

20 *ibid*.

21 Clarendon VII, 104.

22 This may well excuse their inept tactics: see *The Royalist Army at the Battle of Roundway Down*, Brig P. Young, in *Journal of the Society for Army Historical Research*, Vol XXXI, London 1953, p129.

23 Atkins pp23-5.



Shabraque and holster-cover of the type which would fit a 17th-century cuirassier saddle: an example believed to be of Civil War vintage.



THE MASSIVE strategic bombing campaign in Europe was one of the lynchpins of WWII Allied strategy. In 1942, the US Army Air Force joined RAF Bomber Command to begin round-the-clock raids aimed at crippling the Third Reich's war-making capacity. This campaign was unprecedented in scale, and one of its many unforeseen aspects was revealed in an 8th Army Air Force medical study completed in October 1942: over 70% of aircrew casualties were being caused by low-velocity projectiles, chiefly shell fragments from enemy fighter cannon and flak. 8th AAF Surgeon Colonel Malcolm C. Grow, who knew of the body armour trials conducted by the Medical Research Council in England and the Middle East during 1940-42, was convinced that many future aircrew casualties could be prevented or lessened by issuing protective body armour. Grow's commander, General Carl Spaatz, agreed, and instructed him to study the matter in detail.

On the advice of Scotland Yard, Colonel Grow took his ideas to the Wilkinson Sword Company of London, at that time one of the world's leading manufacturers of police and civilian body armour. Together they created an armour ensemble especially suited to the needs of aviators. They based their work on the assumption that a vest capable of stopping the US Army's standard .45 calibre pistol bullet (230 grains at 800 fps velocity) would also resist most flak fragments. In keeping with other Wilkinson designs, small armour plates about two inches square were used to make the vest as flexible as possible. The plates overlapped each other by about .38 inch on each side to prevent penetration between them; this was accomplished by sewing the plates into alternating rows of cloth pockets within a heavy

Flak Jackets

DAVID J. DeLAURANT

AS THE ALLIED bombing offensive against Germany gathered momentum, casualties also mounted but it was soon proven that providing aircrew with body armour reduced fatalities and serious injuries by a significant margin as well as bolstering morale. This article examines the different types of armour worn by American and English bomber crews.

linen canvas cover. The parts of the defence that protected the chest, back and groin were constructed as separate units, which were held together with a combination of steel loops, gut cords and a fabric waist belt. A rip-cord arrangement was incorporated to permit the armour's instant removal prior to baling out.

According to the British MRC studies, the type of armour plate best suited to their purposes was .04-inch-thick 'Hadfield Steel'. This alloy, developed by Sheffield industrialist Sir Robert Hadfield around the beginning of the century, contains from 12% to 15% manganese and possesses physical properties well suited to mass-produced body armour. It can be formed cold and left untempered, reducing the number of production steps and eliminating potential errors in heat treatment. Both its tensile strength and ductility are high, and when penetrated Hadfield Steel does not shatter into secondary missiles. Its only serious shortcoming is a tendency to indent deeply on impact. The helmets worn by British, French, and American troops in WWII were all made from alloys similar to Hadfield Steel.

The modular flak armour ensemble could be recombined to suit differing crew requirements. Since pilots and co-pilots were protected from

behind by armoured chairs, their 8lb Flyer's Vest M2-* was armoured on the front side only. Ball turret and most top turret gunners were unable to wear any form of torso armour in their cramped stations, but other crewmen could use the 16lb Flyer's Vest M1, which had armour on both sides. All models had provisions for attaching a protective 'apron' (also known by the Scots equivalent 'sporrán'), which was made in two types: the 6.5lb rectangular M4 for standing gunners, and the tapered 4.5lb M3 for seated crew.

The 8th AAF's initial order equipped the crew of one B-17 bomber with body armour. The

*The designations used here follow USAAF nomenclature; early Wilkinson suits were labelled Type A Full Vest, Type B Half Vest, Type C Tapered Sporrán, and Type D Full Sporrán

suits were worn on three test flights to confirm that the various ensembles did not interfere with the operation of the aircraft, after which a second order was placed to equip the crews of 12 more B-17s. The flak suits were given a 60-day trial that included eight combat missions. The stories of a few crewmen hit while wearing the early Wilkinson vests serve to illustrate the value of the protective armour:

Radio operator T/Sgt Hubert Carl was hit on both sides of his torso by pieces of a 20mm cannon shell during a mission over Hamm on 4 March 1943. None of the fragments penetrated his vest; he was able to complete his duties during the remainder of the flight and did not require later medical treatment.

During a raid over Wilhelmshaven on 21 May 1943, navigator 1st Lieutenant Jack Fisher was wearing a full vest with a standard M1 helmet when a 20mm cannon shell exploded about two feet from his head. His vest, which was shredded by fragments but not pierced, was described as looking 'like a shotgun had been fired at it from close range'. Instead of being killed, or at the very least crippled, the flak suit enabled Fisher to remain on active duty.

On 28 June 1943, two 20mm shells from an enemy fighter cannon exploded inside the



Malcom C. Grow as a Major-General. (US Air Force.)



British airmen standing beside their Boston III bomber. Three of the men wear US production M1 vests and M4 aprons, with M4 helmets over their standard headgear. (Imperial War Museum.)

nose of a 324th Bomb Squadron aircraft. T/Sgt Lewis M. Vingo, who was acting as bombardier, was hit by several small fragments which failed to penetrate his vest. Vingo escaped injury, while the unarmoured navigator sharing his compartment was wounded in the chest and leg.

Based on experiences like these, 8th AAF Commander Lieutenant-General Ira C. Eaker directed on 1 June 1943 that body armour be made available to all his bomber crews. The 8th AAF's needs were considerable: as of May 1943 they required 11,592 M1 vests, 3,516 M2 vests, and 13,350 M3 and M4 sporrans. The Wilkinson Company could make enough armour to equip 20 B-17s or B-24s per week, but this production rate could not long be maintained as the supply of Hadfield Steel was running short in England. An estimated 600 flak suits were made by Wilkinson, including an improved model with snap fasteners at the waist and shoulders. Samples of the various pieces were shipped to the United States in July 1943 for priority production; by 15 October, sufficient body armour was on hand in England

to equip all 8th AAF bomber crewmen on a rotational basis — a very impressive logistical feat.

The US Army's Ordnance Department soon began seeking improvement for flyers' armour. They conducted an extensive series of experiments to find out which materials proved most resistant to typical anti-aircraft shell fragments. Early ballistic testing used a simple approach called the 'Arena Test', better known by the nickname 'Yankee Stadium'. Armour samples were placed at various distances in a concentric circle around an explosive shell; this was statically detonated, after which the test specimens were inspected for damage. Another method known as the 'Side-Spray Fragmentation Test' involved the static detonation of a 20mm cannon shell within a space surrounded by three (or occasionally four) large frames. In both tests armour samples were secured to steel frames, which were backed with 36 evenly-spaced aluminium sheets .020 inches thick. These thin sheets — called 'witness plates' — served to gauge the remaining kinetic energy of any fragments penetrating the samples. A Hadfield Steel control plate of known characteristics was also included in these tests for comparison purposes. Although both tests were expensive and somewhat imprecise, they were a major

improvement over simply shooting flak vests with a .45 pistol; as might be expected, jagged shell fragments of hardened steel were found to have penetrative characteristics quite different from jacketed lead bullets.

While several kinds of materials showed potential as body armour, three were found to be the most flak-resistant per unit of weight: a fibreglass laminate called Doron, woven Nylon fabric, and woven silk. Nylon gave slightly less protection than silk, but was far more durable, less expensive and easier to produce in large quantities. When combined with plates of aluminium armour, 'Ballistic Nylon' proved more resistant to higher velocity projectiles than Doron. Some experimenters went so far as to recommend that all flyer's clothing from underwear out, including electrically heated flying suits, should be made of Nylon to maximise ballistic protection.

In 1945, a combination of Nylon and aluminium was chosen to replace Hadfield Steel for flak armour. The new armour pieces, designated Flyer's Vest M6 and M7, and Flyer's Apron M8 and M9, provided protection comparable to earlier models, while reducing the weight of the various ensembles by several pounds. The surface area of each aluminium plate was enlarged to about four times that of the earlier steel

plates. This reduced flexibility somewhat, but offered several advantages: assembly time was shortened because a smaller number of plates had to be sewn into place; fewer plates meant less weight, since the amount of extra armour required for the overlapped edges between plates was reduced; most importantly, when hit the larger, more massive plates lessened the severity of 'blunt trauma' injuries occurring behind the armour. The new vests were virtually identical to the earlier models externally, and units of both types could be interchanged. They entered production in 1945 and only a few were manufactured before the war's end.

The US Navy conducted their own series of experiments with flak armour for aviators, and in August 1945 adopted a torso defence constructed entirely of Ballistic Nylon fabric. This used 32 layers of Nylon cloth to provide roughly the same level of protection as the Air Force's aluminium/ Nylon flak armour. Although the Navy vest opened in front instead of at the sides, it was similar in

Colour photos

Airman's flak armour consisting of a M1 vest and M3 apron manufactured by Wilkinson Sword, with an M5 steel helmet. Model Bob Spickard stands beside a B-24 Liberator from California's Castle Air Museum. (Photo by Kermit DeLaurant.)



they spread a layer of extra vests underfoot as a protective carpet. Considerable time and effort was spent trying to discourage this ineffective practice, but it continued until 'flak curtains' constructed from the same materials as body armour became available.

The success of body armour for aviators did not go unnoticed by America's other armed services. Army engineers began using flyers' armour on mine-clearing operations, often in combination with steel eyeshields mounted in rubber goggle frames; one version of the T45 model eyeshield was later type-classified as Eye Armour M14. A special type of crotch armour, the T16, was also developed for engineers, since this area of the body was especially vulnerable to antipersonnel mine fragments. Over 12,000 T16s were eventually produced.

At sea, Motor Torpedo Boat Squadron Number 25 used AAF body armour experimentally for a short period in late 1943. Other sailors occasionally acquired flak suits through less formal channels. USN PT boat gunner Joseph Murnick wore 'a flak jacket that the USAAF and British had discarded' during an action with several German R-boats and an E-boat off Le Havre, France, on 11 August 1944. As he recounted: 'Our skipper, Lieutenant J. G. McCormick (*PT 513*) brought [the vests] to our dock for the taking... we also wore life jackets over the flak jackets. As we attacked in column formation, we took a direct hit into my side of the 40mm [forward gun] about two feet away from me. My helmet and shoes were blown off, and the flak jacket canvas covering was torn up. I did receive shrapnel in my leg and hands, [but] that jacket saved my life.'

Atomic weapons, guided missiles, and jet aircraft completely changed the postwar concept of strategic bombing. Although the venerable B-29 soldiered on through the Korean War, a new generation of high-altitude, swept-wing jet bombers, such as the B-47, B-52 and B-58, were designed for a completely different mission profile. Flak suits were not viewed as appropriate attire for the new aerial combat environment and the concept was shelved, though not completely forgotten. An unforeseen set of circumstances cropped up during the Vietnam War, leading to the development of a much more sophisticated class of body armour employing met-



Close-up of the M3 steel helmet. (Author's photo.)



M4A2 steel helmet. Note the close fit to the skull. (Author's photo.)



Neck armour M13 and M5 steel helmet. (Smithsonian Institution.)



Experimental face protector attached to M3 helmet. (Smithsonian Institution.)

allised ceramic laminates. Even today, body armour still protects aviators on certain types of low-altitude missions. **M**

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Legio XIII GMV: Roman Legionaries Recreated (5)

DANIEL PETERSON

CONTINUING OUR series, by a founder-member of the German-based Flavian Roman army re-enactment and 'living history' group *Legio XIII Gemina Martia Victrix*, on the armour, costume and kit of the legionary of a German garrison legion of the second half of the 1st century AD, we consider here the tents and marching *impedimenta*. The concluding part of this series will appear next month.

Top

Legio XIII GMV in camp; the left tent is the calfskin reconstruction after Sir Ian Richmond's research — a typical contubernium tent for eight men, with very low walls. That at the right is the taller-walled centurion's type, based on goatskin fragments from Vindolanda and the description by Hyginus. (Author's collection.)

Left

Legionary of Legio XIII at the evening halt, with his marching pack arranged on its stake. (Author's collection.)

ROMAN TENTS

LEGIO XIII acquired its first Roman tents in 1986. They were obtained in a trade with Dr Junkelmann, who used them during his trans-Alpine march with *Legio XXI Rapax* from Verona to Augsburg in 1985. As I joined his Roman cavalry group, parting with these unique tents was not too painful, as they were still made available to the cavalry *Ala* on our rides along the Roman Imperial border.

These tents were based on leather fragments, which were clearly parts of Roman tents,

from the sites of Newstead, Scotland, and Valkenburg, Holland. Based on the triangular side-to-roof pieces from Newstead, McIntyre and Richmond deduced the roof angle at 90°, and it is on this reconstruction that the tent is based.

Groenman-van Watterring reconstructed their tent with a much lower 120° roof angle based on the Valkenburg leather finds. The steeper-gabled Newstead tent more closely resembles the line of legionary 'wedge' tents pictured on Trajan's Column, and was the type adopted by *Legio XXI Rapax*, and inherited by *Legio XIII*.

Roman tent leather is derived from both calves and goats. The *Legio XIII* re-enactment groups 'papilio' (Latin: butterfly) required 36 calfskins; if of goatskin, it would use up as many as 72 hides. The Roman nickname for this tent has been attributed to its cocoon-like shape when rolled; but is more obvious when it is laid flat prior to erection with both flaps open, when it has a close resemblance to a butterfly. The tent is 3 metres/ten feet square and 1.9m/6.23ft high. It was shared by a *contubernium* (Roman squad) of eight men, who also shared a mule or similar pack animal to carry it, the millstones, and other squad equipment. The calfskin tent alone weighs 28.5kg though it would be somewhat lighter if made of goatskin.

In 1987 the exciting discovery of a nearly complete corner section of a Roman tent was made at Vindolanda in the Wall country of northern England. The pieces had been used to line a pit, presumably employed as a pool or cistern. This tent was goatskin, and could be described as a true 'wall tent' rather than a 'wedge'. Dr Junkelmann also had this tent reproduced in a similar 3x3m size to his first tents.

A disconcerting trend among some archaeologists is to dismiss earlier finds any time something new comes along, which means that in some circles the Vindolanda find has now become the Roman square tent to the exclusion of the previous finds. Having spent as much time as anyone pitching, sleeping in, and striking this new reconstruction, I have reservations about dismissing the earlier wedge design, particularly since the legionary tents on Trajan's Column are clearly of this type. As 2,000 years of military



Above Augustan-period legionary of the German reconstruction group *Legio XXI Rapax* adjusting centre pole of his tent. Made of calfskin (and requiring 36 hides), it is based on fragments found at Newstead and Valkenburg. (Dr Marcus Junkelmann/CAT Media Productions.) **Below** Trajan's Column shows legionaries fording rivers with their armour and kit held above their heads on their shields. *Legio XIII GMV* take their 'living history' seriously... (Author's collection.)

camp construction will show, the wedge or 'A' frame tent is the only type that can be set up literally edge to edge — as was the Roman camp fashion — without a complicated system of frames or extra poles. The problem is that the Vindolanda find is a classic 'wall' tent, with sides nearly one metre high. If we are to accept the ancient commentator Hyginus' detailed, Trajanic-period description of the Roman camp, only one foot on each side of the *contubernium* tents is allowed for the guy lines. The only way this is possible with the Vindolanda tent is if an elaborate interior frame is constructed, or if each of the exterior guy lines is supported by an additional pole (a total of at least 14!) And it should be noted that there is no archaeological evidence whatsoever to indicate that either of these alternatives was employed on the Vindolanda tent.

While the 'wedge' type tent does not have the luxury of high side walls, it only requires two support poles, and numbers can be set up literally edge to edge, maximising the number of tents which can be erected in any given area. The 'wedge' tent still survives today as the 'pup' tent in the US and many other of the world's armies. The Newstead and Valkenburg reconstructions are 'wall' tents in a sense, but the wall is so low that it does not impact on the allocated guy line requirements, so for all intents and purposes they are essentially 'wedge' tents.

The size controversy

The 'wall' tent has traditionally been an officer's tent, set up where space is not as critical a factor as for the rank and file's tents. The Vindolanda find

should be taken at face value as just that, an officer's 'wall' tent. If this logical conclusion is accepted then everything else falls into place. For example, with its 115-120° gable, it would require guylines to extend about five feet in each direction to properly support the tent with just two support poles. If the tent was ten feet square that would mean that the total space it would occupy in the camp is 20 square feet: exactly the amount of space





The disassembled marching pack reconstructed: the carrying pole lies on the large clothing bag — here of linen, but originally perhaps of animal hide; below the crosspiece is the leather satchel, and below this the netted ration bag; left to right foreground are the bronze cooking/mess tin (*patera*), a water canteen (?) based on examples from Britain and Germany, and a cooking pot. This reconstruction accords in most respects with Trajan's Column, though the canteen does not appear. (Dr Marcus Junkelmann/CAT Media Productions.)

Hyginus allots the tents of regular centurions.

Some people have misinterpreted his description to imply that centurions had 20 foot square tents, and not 20 square feet of area. This is entirely incorrect, as firstly, Hyginus was describing the layout of the camp, the importance lying in how much ground space the tents required inclusive of guy-lines; and secondly, centurions were each allocated one mule to carry their tent, as was each *contubernium*. The single mule could not transport a leather tent measuring 20 feet square. It stands to reason, then, that the typical centurion's tent (the *primi ordines* would have larger types) would have been approximately the size of a *contubernium* tent; but because of his rank and the extra ground space he was allocated, the

centurion could enjoy the luxury of a 'wall' tent.

For these reasons *Legio XIII* will continue to use the Newstead-McIntyre and Richmond 'wedge' tent as the squad *papilio*, but welcome the Vindolanda discovery as the pattern of the unit centurion's quarters. (One final note: when laid flat on the ground with open flaps, the Vindolanda reconstruction makes a terrible, lumpy 'butterfly' compared to the 'wedge' type tent.)

THE MARCHING PACK

Unlike most other Roman reconstruction groups, march and camp equipment is as much an integral part of each *Legio XIII* man's kit as his armour and weapons. Because of the 'living history' nature of so many of the group's activities, he must have his *impedimenta* in order to eat, sleep,

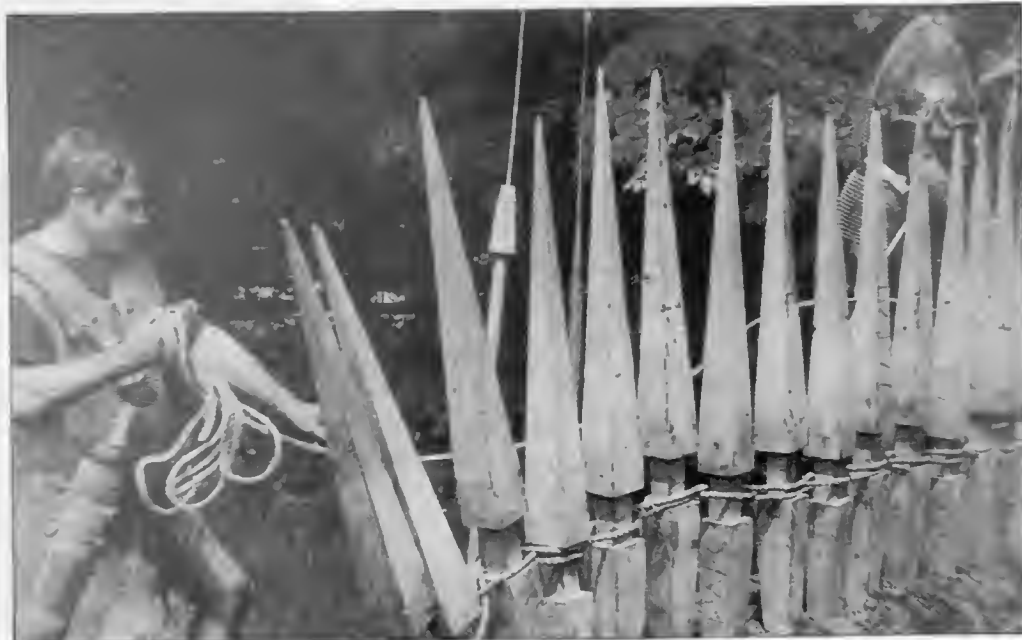
and enjoy the meagre comforts of the authentic camp he must 'live in' during displays.

The marching pack is based on those depicted on Trajan's Column, and built around a T-shaped stick five to six feet long and carried over the left shoulder. Attached to this is a sack (probably of goatskin rather than cloth, for weather protection) in which the cloak, possibly a 'dress' or at least a spare tunic, *feminalia*, stockings and any other clothing might be carried. Strapped above this is a leather satchel, which by means of a leather strap can also be worn over the shoulder like a haversack when the complete marching pack is not required. Items carried in the satchel could include a bronze, horn or wooden spoon; a small iron knife (some were modern-looking folding 'pocket' knives); an oil lamp or

candles; writing equipment (at least some legionaries were literate, since we know this was a requirement for promotion to the various desirable senior appointments); a comb; bathing utensils; gaming items such as dice, knucklebones and tokens; and any other personal effects, as well as a length of chain, rope, leather thongs, spare hobnails, metal polishing equipment, and probably one of several hand tools distributed through each *contubernium*.

Hung to the kit pole crossbar is a net bag inside which is a linen sack holding the grain ration. Fruit, vegetables, cheese, bread loaves and other supplementary food items purchased or foraged might also be added to the bag. There is a possibility that the net bags depicted on Trajan's Column are actually water vessels fash-

Legio XXI Rapax demonstrate a possible arrangement of the *pilum muralis*, the rampart stake of which two were carried for every legionary. Its shape allowed it to be tied together in a straightforward fence, as here, or to be lashed into *chevaux de frise* along a horizontal pole of some kind. (Dr Marcus Junkelmann/CAT Media Productions.)



ioned from animal bladders, the net bag being the practical way to hold a bladder that would otherwise leak if pierced for stitching on carrying straps. A net bag would be an equally practical way of carrying a ceramic vessel.

Several Roman sites have revealed iron vessels shaped much like the wooden and tin 'drum canteens' common in both the American and British armies in the 19th century. It is possible that these were soldiers' water bottles, though they may also have held oils, unguents, or a number of other valuable liquids. Attesting to this is the fact some of the finds had elaborate locking mechanisms, which suggests they contained something more valuable than water (wine?). These metal vessels do not appear on Trajan's Column marching packs, which suggests that the net bags which are portrayed may contain the actual water bottle, in the form of a pottery or bladder vessel. A ceramic jug would certainly keep water or wine cooler than a sheet iron canteen. Bronze cooking and eating vessels can be seen on the Column march-

ing packs, however, hanging on the *impedimenta* poles. These include pots and handled skillets called *paterae*.

Not seen on the Column marching packs but carried by *Legio XIII* members are some larger tools strapped to the kit pole. These include pickaxes, spades, and turf cutters. Other tools not easily stowed in the satchel or strapped to the kit pole are tied to the crossbar and hang behind, such as saws and scythes. Such squad tools are listed in documentary sources. Extra *caligae* and foraged rabbits or birds are also carried in this manner.

There is much confusion over the way the marching kit is supposed to be carried. Some groups have tried strapping their shields to their bodies when on the march. Thus encumbered, problems with the kit pole invariably occur. An examination of the marching order on Trajan's Column simply shows the legionaries carrying their shields in the left hand, and this is how they are managed on *Legio XIII* marches. The prime defect in the Column depiction, which has caused much confusion, is why the artist has shown the marching kit high above the legionary's head. This was probably only done to show the kit to the 'audience'. Normally this equipment rests directly on the legionary's

shoulder, and the kit pole is not even held; it only serves as a counterbalance. This system has been employed on long marches with complete success. Members who found carrying the shield all day long too fatiguing could distribute the weight using a haldric strap looped through the shield's grip and slipped over the shoulder, though it would still be held in place with the arm.

Camp equipment

In addition to the soldier's individual equipment, each eight-man *contubernium* carried their squad property on their baggage animal, either mule or horse. In addition to the leather tent and poles, other items include a large communal cooking pot, a hasket (for carrying earth during camp entrenchment) and the unit millstone. The millstone is actually two lens-shaped pieces of basalt fitted in each other so that the upper one revolves. Grain is poured into a hole in the top, and ground into flour between the two abrading surfaces. The millstone is placed on a leather shield cover on the ground so that the flour can be scooped up from a clean, dry surface.

During 'living history' displays, *Legio XIII* meals are made as authentically as possible. The flour ground on the millstone is used in either a

porridge, or baked into bread. To the porridge is sometimes added salt pork, garlic and vegetables. The bread is made by placing dough 'patties' into the hot ashes until baked; when ready, the thickest ash deposits are scrapped off. More elaborate meals are also prepared, often based on the original Roman recipes of Appicius.

Added to the camp display are *amphorae* for water and wine, and a few pack saddles which serve as makeshift seats.

MI

To be concluded

(The author's book *The Roman Legions Recreated in Colour Photographs*, a large-format paperback containing some 120 colour photographs, is available from bookshops at £12.95 or direct from the publishers, Windrow & Greene Ltd, 5 Gerrard St, London W1V 7LJ, at £12.95 + 10% P&P; ISBN 1-872004-06-7.)

See also:

- 'MI' No 46, March 1992; Pt 1: Historical background, group activities; colour photographs.
- 'MI' No 47, April 1992; Pt 2: Helmets; body armour; mail and scale armour; colour photographs.
- 'MI' No 49, June 1992; Pt 3: Weapons and shields; colour photographs.
- 'MI' No 50, July 1992; Pt 4: Tunics, cloaks and footwear; colour photographs.

The group grind their grain on correctly reconstructed grindstones, and cook simple flour-cakes in the ashes of their campfires, or boil it into a coarse 'porridge'. (Author's collection.)



MAIN ARTICLES IN AVAILABLE BACK NUMBERS:

MI/3: British Officers, Peninsular War (2) — Argentine Commandos, Falklands 1982 — British Infantry, Omdurman, 1898 — Uniforming 'Revolution' — Marcel Bigeard, Indo-China, 1953-54. **MI/5:** U-Boat Uniforms (2) — Jagger's Great War Sculptures — Sayeret Golani, 1982 — Chota Sahib Military Miniatures — Bull Run Re-enactment — Pharaoh Thothmes III, 1482 BC. **MI/6:** British Light Division, Alma, 1854 — 14th Century Wargraves Analysed — British Mercenaries, Baltic, 16th/17th Cents. (1) — Interpreting Napoleonic Prints — Tigerstripe Camouflage, Vietnam (1) — Richard Gale, 1918 & 1945. **MI/7:** 15th Cent. Livery & Badges — U-Boat Uniforms (2) — Tigerstripe Camouflage, Vietnam (2) — British Grenades & Tactics, 1914-18 — British Officers, Boer War — Charles Lasalle, 1806. **MI/8:** 15th Cent. 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We are sure that all our readers will appreciate the hard work put in by reader **Denis R. Hind** of Andreas, Isle of Man, in compiling the following subject index to the first eight volumes of 'MI'. Items are listed under periods and major campaigns and sorted into alphabetical order according to a key word in the title or, occasionally, a category not specifically included in the title (eg. Cohorts Equitatae which is listed as for Roman). Reconstructions and re-enactments, if not obvious from the title, are distinguished by (R). The issue and page are given as a four digit number ie. 0101 would be issue # 1 page # 1, etc.

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GALLERY

Ehud Barak

SAMUEL L. KATZ
Paintings by PETER DENNIS

IN THEIR short existence, the Israeli Defence Forces have secured a number of unprecedented victories and produced some of the most outstanding warrior leaders of modern times. This article examines the distinguished career of Israel's most highly decorated soldier, Major-General Ehud Barak.

IN 1981, EHUD BARAK, at the age of 39, became the youngest general in the short history of the Israel Defence Forces (IDF). Although this should mark a much honoured distinction in the career of General Barak, it is a mere footnote. Barak is the most decorated soldier in Israel's history; the one-time commander of the IDF's most secretive and élite commando unit; a former director of military intelligence; and, most recently, from April 1991 the IDF's chief-of-staff.

Ehud Barak was born in 1942, in Kibbutz Mishmar Hasharon in the Hefer Valley. He was conscripted into the IDF in 1959 and, after being rejected for Pilot's Course, served in a mechanised infantry unit. His athletic abilities, impressive intelligence and innovative style did not go unnoticed in the close-knit IDF command echelons, and he was soon selected to join a highly secretive reconnaissance force being formed along the lines of Arik Sharon's legendary Unit 101. That reconnaissance unit, according to foreign sources, was *Sayeret Mat' Kal* [or 'General Staff Recon']: the most mysterious of all IDF élite units. The often spectacular exploits of this commando unit were rarely mentioned in Israel, and the unit was never identified in the press; it was referred to only as 'an élite unit'. Ehud Barak excelled in its ranks, earning himself a reputation as a superb and heroic fighter. Much of the unit's activities were conducted across Israel's border and, in keeping with such tradition, Barak completed a com-

7 March 1988. Major-General Barak observes and commands the Border Guard anti-terrorist unit's rescue of a terrorist held bus near Dimona. Note woolly pully sweater worn, and Czech 7.65mm Skorpion machine pistol worn as a side arm. (Yuval Navon/IDF)

red beret and returned to his 'élite unit' as its deputy commander; in the two years to follow, Barak commanded three of the IDF's most spectacular operations (operations, that is, which have been declassified). On 8 May 1972, four Palestinian terrorists from the Black September organization hijacked a Belgian Sabena airliner to Lod Airport, in Israel, and threatened to kill the 100 hostages if 300 Palestinian prisoners were not released from Israeli jails. Vowing not to succumb to terrorism, the IDF despatched its 'élite unit' to execute 'Operation Isotope 1'. Disguised as mechanics in white coveralls, the commandos stormed the aircraft, killed two of the terrorists and captured the other two.

The operation was labelled in the Israeli media as a 'lightning strike' although few knew that Ehud Barak ('Barak' in Hebrew means lightning) was behind the spectacular rescue. A month later, Lieutenant-Colonel Barak commanded an operation whose objective was the kidnapping of five senior Syrian Army officers in





Lieutenant-General Ehud Barak becomes the IDF's fourteenth Chief-of-Staff and the first commander of Sayeret Mat' Kal to emerge from the 'top secret club' on 1 April 1991. (IDF Spokesman.)

Lebanon; senior commanders who were directing terrorist acts against Israel. In what was to become known as 'Operation Basket 2', Barak commanded another of Israel's most famous soldiers, Yonatan 'Yoni' Netanyahu (later commander of the ground forces at Entebbe) and proceeded in seizing the Syrian officers; they were later, and with little fanfare, exchanged for two Israeli pilots held in Damascus.

Perhaps Barak's most spectacular 'known' mission was his participation in 'Operation Spring of Youth'. On the night of 9-10 April 1973, an armada of IDF/Navy missile boats landed several teams of Israeli commandos on the Beirut shore; the objective for Barak's 'élite unit' was the assassination of Black September's three top officers. To avoid suspicion during the drive through Beirut, the Sayeret Mat' Kal team was, according to foreign sources, dressed as hippies; Barak, not to be outdone, was dressed in drag — including blonde wig and falsies.

When the 1973 Yom Kippur War erupted, Colonel Barak found himself in the United States, completing his master's

degree at Stanford University, in California. He hurried back to Israel, gathered 30 tanks awaiting repair and raced them to Sinai. His force, oddly enough, rescued paratroopers pinned down in the Chinese Farm; the paratrooper's commander, Colonel Uzi Yairi, had been Barak's commander in the 'élite unit' for many years. Barak's piecemeal tank battalion participated in the fierce, close-quarter battle for Suez City and his force suffered heavy casualties.

Following the 1973 War, Barak quickly advanced up the IDF's ladder of command, including brigade commands and several secret assignments. In 1981, he became the head of the IDF Planning Branch, and the Director of Military Intelligence in 1983. On 16 April 1988, as serving IDF Operations Chief, Barak was, according to foreign sources, to have flown in an Israeli Air Force Boeing 707 to oversee the assassination of Abu Jihad in Tunis — an operation which was almost the mirror image of his brilliantly executed raid on Beirut 15 years earlier. Barak remains a clearly mysterious figure in the history of the IDF — the reasons behind his five decorations remain state secrets to this day. It is quite clear, however, that he is one of the most capable leaders the IDF has yet to produce. **MI**

Peter Dennis's reconstructions on the rear cover show (top) Ehud Barak as a Lieutenant-Colonel, deputy commander of Sayeret Mat' Kal, in 1972-73 — the period during which he led elements of this highly classified 'General Staff Reconnaissance Unit' in several daring external operations, notably Operation 'Argaz Bet' to kidnap five senior Syrian intelligence officers from Lebanon, and the successful recapture of the Belgian Sabena airliner hijacked by Black September and held at Lod airport. On operations the 30-year-old Barak wears standard issue IDF olive fatigue shirt and three-pocket trousers, with brown Israeli paratroop boots. His only insignia are the yellow stencilled 'TZAHAL' acronym above the left breast pocket; and the two bright green 'falafel' leaves of his rank on sand-khaki field service shoulder strap slides. His webbing includes a belt modelled on the British '37 type, Israeli grenade pouches on the right front, an AK-47 pouch on the left (many were captured, but it was later made in Israel); US-inspired canteens were also standard. The huge quantities of Soviet bloc weaponry captured in Israel's wars have been used to good effect, and AKs are an obvious choice for cross-border operations.

(Below) Lieutenant-General Barak as IDF Chief of Staff, April 1991. He wears the new Class A dress uniform of very pale stone shirt and olive slacks, with black dress shoes.

As an airborne veteran he wears the maroon beret of the paratroopers, with the Chief of Staff's bronze-finish GHQ badge. On the shirt shoulder straps olive slides bear the two leaves and crossed sword and palm of lieutenant-general — the Chief of Staff is historically the only serving officer of this rank. On the left shoulder an olive hanging tab bears the patch of the General Staff — superimposed wings, anchor, and sword-and-palm, on dark blue. The silver officer's qualification pin, again the sword-and-palm motif, is worn on the left collar point; and on the right pocket flap the small red-enamelled operational service pin — the sword over flames. At the top of the left breast display are basic parachutist's wings in silver on a light blue backing. On the pocket flap is the silver head-on tank motif marking qualification in the armoured branch. Lieutenant-General Barak is the most highly decorated soldier in IDF history. The three rows of ribbons indicate (top): two awards of the TZA'LA'SH HA'RAMAT'KAL, the Chief of Staff's Commendation for bravery — the triple crossed swords are normally worn on campaign ribbons, but their display on plain olive ribbons marks award for 'peacetime' covert operations; (second row) two more Chief of Staff's Commendations flank the plain blue ribbon of the third highest award for bravery, the I'TUR HAMOFET; (third row) the medals for the 1967, 1973, and 1982 (Lebanon) campaigns.

Ehud Barak

Chief of Staff, 1991



Counter-terrorist
operations, 1972-73

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